

**COURSE DESCRIPTION WITH STUDENT OUTCOMES**

**LORAIN COUNTY COMMUNITY COLLEGE**

**DIVISION:** Allied Health and Nursing

**COURSE TITLE:** Introduction to Hematology

**COURSE NUMBER:** CLSC 131

		Contact Hours/Week			Weight		ILU's			
LECTURE/ RECITATION	=	2	X	LECTURE/ RECITATION	(1.0)	=	2			
LAB	=	1.5	X	LAB	(0.85)	=	1.28			
CLINICAL	=		X	CLINICAL	(1.0)	=				
*	=			*		=				
*	=			*		=				
<b>TOTAL CONTACT HOURS:</b>	=	3.5		<b>TOTAL COURSE ILU's</b>		=	3.28	<b>CREDIT HOURS:</b>	=	2

\* Please refer to the "Quality Point Checklist for New and Revised Courses" and/or Pages 500.01 through 500.05 of the Ohio Board of Regents Operating Manual for Two-Year Campus Programs for Instructional Arrangements that are not identified as Lecture/Recitation, Lab or Clinical. ([http://regents.ohio.gov/academic\\_programs/2yr/2yrmanual.pdf](http://regents.ohio.gov/academic_programs/2yr/2yrmanual.pdf))

**IS THERE A SEPARATELY SCHEDULED LAB:** Yes

**IS THERE A SEPARATELY SCHEDULED CLINICAL:** No

**SPECIAL FACILITIES:**

**START YEAR/SEMESTER:** Fall 2009

**PREREQUISITE:** High school algebra or equivalent.

(Please indicate course/s that must be taken before this course.)

**COREQUISITE:** CLSC 112, CLSC 133

(Please indicate course/s that must be taken with this course.)

**CONCURRENT:** CLSC 111

(Please indicate course/s that must be taken before or with this course.)

**CATALOG DESCRIPTION:**

Introduction to venous and micro blood collection techniques, Introduction to basic hematology theory and laboratory procedures. College competency required in the performance of venous and micro blood collection, normal WBC differentials, Erythrocyte Sedimentation Rates, platelet counts, and reticulocyte counts. (A special fee will be assessed.) *Prerequisite: High school algebra or equivalent; Corequisite: CLSC 111, CLSC 112, CLSC 133.*

*Italicized areas can be Fast-tracked through the Divisions/Provost/VP ALS*

**REQUIRED TEXTBOOK(S)/MATERIAL(S):**

- *Course Syllabus*
- *Lecture Handouts*
- *Clinical Laboratory Science Technology Program Student Handbook*
- *Hematology: Clinical Principles and Applications, 3<sup>rd</sup> ed.; Bernadette F. Rodak; W.B. Saunders, 2007.*
- *Clinical Hematology Atlas, 2<sup>nd</sup> ed.; Jacqueline Carr and Bernadette Rodak; Elsevier Saunders, 2004.*

**TOPICAL OUTLINE: (COMMON CORE TOPICS)**

- *Venous Blood Collection*
- *Micro Blood Collection*
- *Quality Assurance/Control Programs*
- *Introduction to Hematology*
- *Red Blood Cell Maturation*
- *White Blood Cell Maturation*
- *Platelet Maturation*
- *Blood Films*
- *White Blood Cell Differentials*
- *Reticulocyte Counts*
- *Erythrocyte Sedimentation Rate*

**COURSE OUTCOMES & ASSESSMENT:**

*(Tools, Methods, and Expected Results)*

<i>Outcomes</i>	<i>Assessment Method(s) .</i>
<b><i>Cognitive / Knowledge: What should the students know from studying this discipline?</i></b>	
<i>1. Describe the principles, procedures, and equipment involved in the collection of venous and capillary blood specimens for laboratory testing.</i>	<ul style="list-style-type: none"> <li>• <i>Objective Assessment (e.g., quizzes and exams)</i></li> <li>• <i>College laboratory worksheets</i></li> </ul>
<i>2. Predict potential complications that can occur during the procedures of venous and capillary blood collection and the appropriate resolution of complications.</i>	<ul style="list-style-type: none"> <li>• <i>Objective Assessment (e.g., quizzes and exams)</i></li> <li>• <i>College laboratory worksheets</i></li> </ul>
<i>3. Describe principles and procedures of tests performed in a clinical laboratory in the area of Basic Hematology.</i>	<ul style="list-style-type: none"> <li>• <i>Objective Assessment (e.g., quizzes and exams)</i></li> <li>• <i>College laboratory worksheets</i></li> <li>• <i>National Certification Exam results (ASCP)</i></li> </ul>

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<p>4. <i>Relate normal and abnormal laboratory test results to their corresponding clinical significance.</i></p>	<ul style="list-style-type: none"> <li>• <i>Objective Assessment (e.g., quizzes and exams)</i></li> <li>• <i>College laboratory worksheets</i></li> <li>• <i>National Certification Exam results (ASCP)</i></li> </ul>
<p><b><i>Behavior / Skills: What should a student be able to do as a result of studying this discipline?</i></b></p>	
<p>5. <i>Demonstrate satisfactory entry-level skill at the Medical Laboratory Technician / Clinical Laboratory Technician level in the safe collection of venous and capillary blood specimens for laboratory testing.</i></p>	<ul style="list-style-type: none"> <li>• <i>College laboratory competency evaluation</i></li> </ul>
<p>6. <i>Operate and maintain laboratory instruments used in the performance of tests in the area of Basic Hematology with entry-level skill at the Medical Laboratory Technician / Clinical Laboratory Technician level.</i></p>	<ul style="list-style-type: none"> <li>• <i>College laboratory competency evaluation</i></li> </ul>
<p>7. <i>Demonstrate satisfactory entry-level skill at the Medical Laboratory Technician / Clinical Laboratory Technician level in the performance of laboratory tests in the area of Basic Hematology.</i></p>	<ul style="list-style-type: none"> <li>• <i>College laboratory competency evaluation</i></li> </ul>
<p><b><i>Values / Attitudes: What additions or changes should the student experience in interest, appreciations, beliefs, judgments, etc. as a result of studying this discipline?</i></b></p>	
<p>8. <i>Demonstrate decision-making / problem-solving skills in the performance of test procedures in the area of Basic Hematology.</i></p>	<ul style="list-style-type: none"> <li>• <i>College laboratory competency evaluation</i></li> </ul>
<p>9. <i>Demonstrate an ethical and professional attitude in all aspects of their course performance, adhering to all program policies and procedures as delineated in the Program Student Handbook.</i></p>	<ul style="list-style-type: none"> <li>• <i>Student signature pages acknowledging understanding of all program policies and procedures</i></li> <li>• <i>100% of students will comply with program policies and procedures.</i></li> </ul>

## GENERAL EDUCATION REQUIREMENT: OUTCOMES AND ASSESSMENT

Core course outcomes:

- C1: English: Demonstrate logical organization, coherent thinking, and precision in writing.
- C2: Mathematics: Utilize college mathematics to solve problems.
- C3: Natural Science: Apply scientific concepts and methods of inquiry.
- C4: Social Science: Apply concepts, principles and methods of inquiry in the social sciences.
- C5: Humanities: Examine the nature of human expression and/or artistic creativity.

Infused outcomes:

- In1: Critical Thinking: Employ critical thinking skills in addressing issues and problems.
- In2: Communication: Demonstrate competence in verbal and nonverbal communication.
- In3: Diversity: Analyze the role of diversity in the development of the individual, the community, and the global society.
- In4: Ethics: Apply personal, professional, social and civic values.
- In5: Health: Identify behaviors that promote health of the individual.

General Education Outcomes	Corresponding Course Outcomes
In1 Critical Thinking: Employ critical thinking skills in addressing issues and problems.	#2, 4, 7, 8
In2 Communication: Demonstrate competence in verbal and nonverbal communication.	#5
In4 Ethics: Apply personal, professional, social and civic values.	#9

### ***SUGGESTED INSTRUCTIONAL METHOD(S) AND TECHNIQUE(S):***

- *Lecture*  
*Demonstrations*
- *Videotapes*  
- *Applied Phlebotomy Video Series: Basic Venipuncture*  
- *Blood Collection: The Pediatric Patient*
- *Laboratory practice exercises and evaluations*

### ***GRADING PROCEDURES:***

- *Quizzes* 30%
- *Midterm Examination* 35%
- *Final Examination* 35%
- *College Laboratory Exercises and Worksheets* Pass/Fail

### **TRANSFER MODULE REQUIREMENT CHANGES:**

- None
- Add to English Composition area of Transfer Module
- Add to Arts/Humanities area of Transfer Module
- Add to Social and Behavioral Sciences area of Transfer Module
- Add to Mathematics area of Transfer Module
- Add to Natural and Physical Sciences area of Transfer Module

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**MISCELLANEOUS**

- Add to Transfer Assurance Guide (TAG)/Ohio Articulation Number (OAN)  
**CLSC 131 + CLSC 134 = OHL009**  
 Add "G" for International Course (at least 30% of content is outside U.S.)  
 Course/Cluster Program Review Underway

***OTHER RESOURCES INCLUDING EQUIPMENT AND SOFTWARE:***

- Library/Learning Resource Review*  
 *IS&S/ITMS Resource Review (Complete form if special technology is needed.)*  
 *Facilities Planning Resource Review (Complete form if special facilities are needed.)*

- *Venous Blood Drawing Equipment*
- *Artificial Blood Drawing Arms*
- *Micro Blood Collection Equipment*
- *Pipettes and General Laboratory Glassware*
- *Wright Stain*
- *Binocular Student Microscopes*
- *Differential Counters*
- *Cell Counting Chambers*
- *Analytical Balance*
- *Conference Microscope*
- *Gloves*
- *Goggles*
- *Microscope Slides*
- *Cover Glasses*
- *Quality Control Material*
- *Microhematocrit Equipment and Centrifuge*
- *Table Top Centrifuge*
- *Brilliant Cresyl Blue Stain*
- *New Methylene Blue N Stain*
- *Erythrocyte Sedimentation Tubes and Equipment*

Rev:

Date: 8-1-2008

JD/JM