INTRODUCTION TO CLINICAL LAB SCIENCES (MLS3031)  
Sections 1287, 2 Credit Hours  
Online Classroom (eLearning)  

Instructor: Kristen Hellein  
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Office: Bldg 58, Room 005  
Office Hours: Tuesday 2 – 3pm; Thursday 2 – 3pm  
Phone: 850-857-6021

Required Text: None. Materials will be posted as PDF files on eLearning with each week’s module.

Prerequisites or Co-Requisites: None

Course Description: This is a survey course for students interested in a career in Medical Laboratory Science. The class will introduce the various careers in a Clinical Laboratory with the emphasis on the Medical technologist/Clinical Lab Scientist. The main divisions of the lab will be discussed, Clinical Chemistry, Blood Bank, Hematology, Microbiology, Urinalysis and Body Fluids, and Coagulation. A field trip to a local hospital lab will be arranged.

Student Learning Outcomes: The Academic Learning Compact for the Clinical Laboratory Sciences Program emphasizes the six dimensions of Content, Critical Thinking, Communication, Integrity/Values, Project Management and Hazard and Risk Management.

Student Learning Outcomes and their respective ALCs follow. All SLOs are evaluated by examination. Following the lab and lecture components of this class, the successful student will be able to:

1. Define Clinical Lab Science as a profession – the duties, salary, employment opportunities, working conditions, and define the roles of the other professionals in the laboratory. ALC: content. Assessed by exam.

2. Discuss basic principles, terminology and procedures of the following subject areas: hematology, coagulation, microbiology, clinical chemistry, urinalysis, and immunohematology. ALC: content. Assessed by exam.

3. Interpret clinical laboratory results as normal or abnormal. Correlate specific laboratory results to diseases. Integrate the role of the laboratory in the diagnosis and treatment of patients with specific disease. ALC: critical thinking and project management. Assessed by homework and exam.

4. Recommend the appropriate safety precautions for biologic and chemical substances. ALC: Hazard and Risk Management. Assessed by exam.
Spring 2012

Topics Covered: See schedule.

Class Policies: Strict adherence to the following will be a requirement for course completion.

Method of Instruction: This class is a lecture delivered entirely online with internet based exercises. Classes will open by 12am Monday of each week. Each week’s module will contain Student Learning Outcomes, Narrated Powerpoint, Assigned Reading, Supplemental Reading for Discussion (if applicable), Homework Assignment, and a Quiz (which will open at 12am Friday). Each class period will have a chapter of text and usually a web and/or lab like activity. This is a 2 credit course. I expect that reading the chapter, doing the exercise and answering the homework will take about 3 hours per week. Book chapters should be saved to your computer, and printed as well. Study from the computer images, as they will be in color and can be magnified.

Grading/Evaluation:

Weekly Quizzes: 5 pts. each. Quizzes will be on that week’s presented material. They will open on Fridays at 12:00am and close Sundays at 11:59pm, as indicated in the schedule. No make-up quizzes will be allowed. Quizzes are graded immediately and quiz answers will be made available once the quiz closes.

Homework: 10 pts. each. Homework will open with the week’s module. It will be due in the appropriate Dropbox by 11:59 Sunday of that week, as indicated in the schedule. I will grade and return homework to you within one week. Late assignments will not be accepted.

Discussions: 10 pts. each. As indicated in the schedule, a relevant news article will be posted approximately every other week. You will be required to participate in a guided discussion forum on the topic of the article. The quality of your participation is being graded. Discussions participation must be completed by Sunday of that week at 11:59pm, as indicated in the schedule. Please read the Netiquette Rules before participating.

Exams: 100 pts. each. You must come to the UWF campus to take proctored exams. At the start of the semester, we will decide as a class what is a convenient day and evening time during the week of the exam for us to meet. You will have the option to come to either scheduled time, or if neither are convenient, schedule a time with me to come in and take your exam during that week.

Lab Tour: 50 pts. We will meet once at a local hospital for a tour. This tour is mandatory. Students who are unable to meet for this tour have the option of arranging a tour at a different hospital, and reporting on it, or of writing a paper on the laboratory role in a specific disease of their choice. I can provide lab contacts at several hospital labs in the Pensacola and Ft. Walton Beach area.
Grading policies: Grades are determined as follows:

<table>
<thead>
<tr>
<th></th>
<th>% of grade</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>10</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>10</td>
</tr>
<tr>
<td>Discussions</td>
<td>10</td>
</tr>
<tr>
<td>Exam 1</td>
<td>25</td>
</tr>
<tr>
<td>Exam 2</td>
<td>25</td>
</tr>
<tr>
<td>Lab Tour</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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Grading Scale:

93-100 = A  
90-92 = A-  
87-89 = B+  
83-86 = B   
80-82 = B-  
77-79 = C+  
73-76 = C  
67-69 = D+  
63-66 = D   
60-64 = D-  
Below 63 = F

Expectations for Academic Conduct/Plagiarism Policy:
As members of the University of West Florida, we commit ourselves to honesty. As we strive for excellence in performance, integrity—personal and institutional—is our most precious asset. Honesty in our academic work is vital, and we will not knowingly act in ways which erode that integrity. Accordingly, we pledge not to cheat, nor to tolerate cheating, nor to plagiarize the work of others. We pledge to share community resources in ways that are responsible and that comply with established policies of fairness. Cooperation and competition are means to high achievement and are encouraged. Indeed, cooperation is expected unless our directive is to individual performance. We will compete constructively and professionally for the purpose of stimulating high performance standards. Finally, we accept adherence to this set of expectations for academic conduct as a condition of membership in the UWF academic community. Please see the training tutorial on plagiarism at http://library.uwf.edu/Tutorials/module_plagiarism/default.htm.
Code of Conduct: The Student Code of Conduct sets forth the rules, regulations and expected behavior of students enrolled at the University of West Florida. Violations of any rules, regulations, or behavioral expectations may result in a charge of violating the Student Code of Conduct. It is the student's responsibility to read the Student Code of Conduct and conduct themselves accordingly. Students may access the current Student Code of Conduct at http://www.uwf.edu/judicialaffairs.

Students with Disabilities: The Student Disability Resource Center (SDRC) at the University of West Florida supports an inclusive learning environment for all students. If there are aspects of the instruction or design of this course that hinder your full participation, such as time-limited exams, inaccessible web content, or the use of non-captioned videos and podcasts, please notify the instructor or the SDRC as soon as possible. You may contact the SDRC office by e-mail at sdrc@uwf.edu or by phone at (850) 474-2387. Appropriate academic accommodations will be determined based on the documented needs of the individual.

Computer Savvy: Not all of us are computer savvy. Please see the material in the Orientation section of your eLearning site for tutorials and information of computer help.

Course Withdrawal: The deadline for withdrawal is 16 March 2011. The last day for Drop/Add is 13 January 2011. The UWF website for the Academic Calendar is: http://uwf.edu/registrar/calendar.cfm

Flexibility: It is the intention of the instructor to accomplish the objectives specified in the course syllabus. However, circumstances may arise which prohibit the fulfilling of this endeavor. Therefore, this syllabus is subject to change. When possible, you will be notified of any change in advance of its occurrence.
### Schedule **Note: Will add in lab tour when it is scheduled.**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Module And Topics Covered</th>
<th>Reading Assignments</th>
<th>Graded Material</th>
</tr>
</thead>
</table>
| 9 – 15 Jan| **Module 1:**  
- Welcome Video, Guide to Online Learning  
- Student Learning Outcomes  
- Narrated Powerpoint: Introduction and Expectations  
- Explore Lab Scientist Website  
**Required:**  
- Welcome Letter (written version of video contents)  
- PDF “Introduction to Clinical Lab Sciences”  
**Supplemental:** none | **Homework:** Assignment 1 due by 11:59 pm Sun, 15 Jan.  
**Quiz:** Quiz 1; Opens 12:00am 13 Jan, Closes 11:59pm Sun, 15 Jan.  
**Discussion:** None |
| 16 – 22 Jan| **Module 2:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Safety Issues  
- Safety Video  
**Required:**  
- PDF “Safety Issues”  
**Supplemental:** none | **Homework:** Assignment 2 due by 11:59 pm Sun, 22 Jan.  
**Quiz:** Quiz 2; Opens 12:00am 20 Jan, Closes 11:59pm Sun, 22 Jan.  
**Discussion:** None |
| 23 – 29 Jan| **Module 3:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Sample Types and Collection  
**Required:**  
- PDF “Introduction to Clinical Lab Sciences”  
**Supplemental:** Article on new sample collection methods…. | **Homework:** Assignment 3 due by 11:59 pm Sun, 29 Jan.  
**Quiz:** Quiz 3; Opens 12:00am 27 Jan, Closes 11:59pm Sun, 29 Jan.  
**Discussion:** Discussion Forum “xxxxx”, Opens 12:00am 23 Jan, Closes 11:59pm Sun, 29 Jan. |
| 30 Jan – 5 Feb| **Module 4:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Introduction to Immunohematology  
- Video on Immunohem (if available)  
**Required:**  
- PDF “Introduction to Immunohematology”  
**Supplemental:** None | **Homework:** Assignment 4 due by 11:59 pm Sun, 5 Feb.  
**Quiz:** Quiz 4; Opens 12:00am 3 Feb, Closes 11:59pm Sun, 5 Feb.  
**Discussion:** None |
### Spring 2012

| 6 – 12 Feb | **Module 5:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Introduction to Microbiology  
- Explore Parasite Website | **Required:**  
- PDF “Introduction to Microbiology”  
**Supplemental:** Article on parasitology…. | **Homework:** Assignment 5 due by 11:59 pm Sun, 12 Feb.  
**Quiz:** Quiz 5; Opens 12:00am 10 Feb, Closes 11:59pm Sun, 12 Feb.  
**Discussion:** Discussion Forum “xxxxx”, Opens 12:00am 6 Feb, Closes 11:59pm Sun, 12 Feb. |
| --- | --- | --- |
| 13 – 19 Feb | **Module 6:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Introduction to Urinalysis | **Required:**  
- PDF “Introduction to Urinalysis”  
**Supplemental:** none | **Homework:** Assignment 6 due by 11:59 pm Sun, 19 Feb.  
**Quiz:** Quiz 7; Opens 12:00am 17 Feb, Closes 11:59pm Sun, 19 Feb.  
**Discussion:** None |
| 20 – 26 Feb | **Module 7:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Introduction to Hematology | **Required:**  
- PDF “Introduction to Hematology”  
**Supplemental:** Article on rare blood cancers | **Homework:** Assignment 7 due by 11:59 pm Sun, 12 Feb.  
**Quiz:** Quiz 7; Opens 12:00am 24 Feb, Closes 11:59pm Sun, 26 Feb.  
**Discussion:** Discussion Forum “xxxxx”, Opens 12:00am 20 Feb, Closes 11:59pm Sun, 26 Feb. |
| 27 Feb – 4 Mar | **EXAM 1:** All material covered up to this point  
**Date and Place:** TBA | None | None |
| 5 – 11 Mar | **Module 8:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Laboratory Role in Sickle Cell Anemia | **Required:**  
- PDF “Laboratory Role in Sickle Cell Anemia” | **Homework:** Assignment 8 due by 11:59 pm Sun, 11 Mar.  
**Quiz:** Quiz 8; Opens 12:00am 9 Mar, Closes 11:59pm Sun, 11 Mar. |
| 12 – 18 Mar | **Module 9:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Introduction to Chemistry | **Supplemental:** Article on sickle cell anemia and malaria | **Discussion:** Discussion Forum “xxxxx”, Opens 12:00am 5 Mar, Closes 11:59pm Sun 11 Mar. | **Homework:** Assignment 9 due by 11:59 pm Sun, 18 Mar.  
**Quiz:** Quiz 9; Opens 12:00am 16 Mar, Closes 11:59pm Sun, 18 Mar.  
**Discussion:** None |
| 19 – 25 Mar | **SPRING BREAK** | | |
| 26 Mar – 1 Apr | **Module 10:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Laboratory Role in Diabetes mellitus | **Required:**  
- PDF “Laboratory Role in Diabetes mellitus”  
**Supplemental:** Article on recent rates of diabetes | **Homework:** Assignment 10 due by 11:59 pm Sun, 1 Apr.  
**Quiz:** Quiz 10; Opens 12:00am 30 Mar, Closes 11:59pm Sun, 1 Apr.  
**Discussion:** Discussion Forum “xxxxx”, Opens 12:00am 26 Mar, Closes 11:59pm Sun 1 Apr. |
| 2 – 8 Apr | **Module 11:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Introduction to Immunodiagnostics  
- Watch Animations on Methods Discussed | **Required:**  
- PDF “Introduction to Immunodiagnostics”  
**Supplemental:** Article on fluorescent microscopy | **Homework:** Assignment 11 due by 11:59 pm Sun, 8 Apr.  
**Quiz:** Quiz 11; Opens 12:00am 6 Apr, Closes 11:59pm Sun, 8 Apr.  
**Discussion:** Discussion Forum “xxxxx”, Opens 12:00am 2 Apr, Closes 11:59pm Sun 8 Apr. |
| 9 – 15 Apr | **Module 12:**  
- Student Learning Outcomes  
- Narrated Powerpoint: Laboratory Role in HIV/AIDS | **Required:**  
- PDF: “Laboratory Role in HIV/AIDS”  
**Supplemental:** None | **Homework:** Assignment 11 due by 11:59 pm Sun, 15 Apr.  
**Quiz:** Quiz 12; Opens 12:00am 13 Apr, Closes 11:59pm Sun, 15 Apr.  
**Discussion:** None |
**Module 13:**
- Student Learning Outcomes
- Narrated Powerpoint: Novel Molecular Techniques

**Required:** None

**Supplemental:** Article on new technique gaining traction in hospital

### Homework
Assignment 11 due by 11:59 pm Sun, 15 Apr.

### Quiz
Quiz 12; Opens 12:00am 13 Apr, Closes 11:59pm Sun, 15 Apr.

### Discussion
Discussion Forum “xxxxx”, Opens 12:00am 16 Apr, Closes 11:59pm Sun 22 Apr.

**23 – 29 Apr**

**FINAL EXAM:** All material covered since previous exam

None

None