

**The University of Texas at El Paso  
College of Health Sciences  
Clinical Laboratory Science Program**

**Concepts in Immunodiagnostics (CLSC 3351)**

**Summer-I, 2009**

**Instructor:**

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**Lectures:** Tuesday and Thursday, 12:00 – 3:00 p.m., and Friday, 12:00 – 2:15 p.m.

**Office hours:** Tuesday and Thursday, 11:00 a.m. – 12:00 p.m. and by appointment.

**Textbook:** Clinical Laboratory Immunology

Authors: Mahon, C.R., Tice, D.

Publisher: Pearson Prentice Hall

**Welcome to the UTEP Clinical Laboratory Science Program**

Clinical Laboratory Sciences is a profession that serves as a vital partner in clinical diagnosis and medical decision-making. Clinical laboratory scientists perform laboratory analyses to diagnose, treat, and monitor disease, and to evaluate the maintenance of an individual's health. These healthcare professionals are experts in the scientific disciplines of clinical chemistry, hematology, immunology, immunohematology, and microbiology.

Immunology as a science has expanded dramatically and the use of immunologic procedures are currently across disciplines. Applications of immunologic procedures are used for the detection of infectious agents, autoimmune disorders,

**Course Description:**

This course covers basic clinical laboratory immunology and applications in laboratory medicine. Interactions among immune cells and their secretions are examined. The role of the immune system in tumor growth, transplantation and rejection, and autoimmune diseases is covered.

Various methods utilized in the clinical laboratory are demonstrated and discussed. This course includes the principles and practices of quality control and pre-analytical, analytical, and post analytical components of clinical immunology.

**Course Goal:**

At the end of this course, the student will develop a strong foundation of the basic principles of immunity and the human immune system. In addition, clinical applications will be discussed including principles and practices of quality control and pre-analytical,

analytical, and post analytical components of clinical immunology.

### **Course Objectives:**

Upon completion of this course, the student should be able to exhibit the appropriate responsible behaviors by demonstrating:

1. A positive attitude by being prepared for lecture completing assigned tasks on time and displaying self-motivation.
2. Organization by utilizing time effectively, sequencing and prioritizing tasks for completion with time constraints and maintaining a neat clean work.
3. Attention to detail by diligently pursuing accuracy.
4. Stability and self-confidence by approaching and performing routine tasks confidently without assistance and maintaining composure.
5. Appropriate interpersonal skills by cooperating and communicating effectively with classmates and instructors and displaying courteous, considerate behavior and appropriate appearance.
6. Ethical behavior and integrity adhering to safety policies and abiding by all rules and regulations of the institution

### **Some hints on how to succeed in this course**

It is essential to develop good study skills in order to succeed in any course you take.

Good study skills not only save you time and energy, but also help you learn more effectively. Four study skills that will promote your learning are self-management, constructing good notes, reading to learn, and studying with others.

#### ***Self-management techniques:***

It is critical that you will manage your time wisely. Organize yourself by planning a schedule. In this schedule you may want to record time for reading, reviewing and studying for tests. Adjust your schedule as the course progresses. Pace the course workload evenly. Use a study location free of distractions and review periodically.

#### ***Creating useful notes***

Identify new ideas, summarize main ideas from lecture or text, create outlines, flow charts, trees, concepts; underline selectively and rewrite your notes. Power point handouts alone are not sufficient to master the material presented and the student must attend class and take notes.

#### ***Reading to learn***

Determine your purpose for reading; preview the text (titles, summaries, diagrams); turn titles and headings into questions; read for main ideas; re-read, visualize, relate; review.

#### ***Study with others***

Study groups is one of the best ways of learning. Review the subject, formulate questions, and discuss main ideas. Test each other for knowledge. Explain what you have learned to others. If you can clearly explain the material you have learned, then you can be sure you know your material well.

**Class Attendance:** The student is expected to attend all classes. It is the responsibility of the student to notify the instructor of any absence. In the case of an emergency or illness, the instructor should be notified as soon as possible. When, however, in the judgment of the instructor, a student has been absent to a degree as to impair his or her status relative to credit for the course, the instructor may drop the student from the class with a **W** before the course drop deadline or with an **F** after the course drop deadline. If a student is 10 minutes late this will be recorded as a tardy. Two tardies make one absence.

**Academic dishonesty:** Won't be tolerated. Any student suspected of academic dishonesty may be subject to disciplinary action, including the possibility of failure of the course and dismissal from the university. "Scholastic dishonesty includes but is not limited to cheating, plagiarism, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act to give unfair advantage to student or the attempt to commit such acts." Regent's Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22. Since scholastic dishonesty harms the individual, all students, and the integrity of the university, policies on scholastic dishonesty will be strictly enforced.

**Grading Policy:**

- There will be three exams on the material covered in class during the semester. You must take all four exams. No make up for exams is allowed.
- Various assignments will be given during the semester. The assignments may include case studied to be discussed in class. Details about the nature of the assignments will be given during the first week of classes.
- There will be a comprehensive Final Exam in all the chapters that we covered in class.

**Grade distribution among course tasks:**

Exams	50 %
Final Exam	30 %
Assignments	10 %
Attendance	10 %

**Grading Scale:**

90 - 100	A
80 – 89	B
75 - 79	C
65 – 74	D
< 64	F

## **Class Schedule:**

<b>Lecture</b>	<b>Topic</b>	<b>Chapter</b>
1	Introduction to immunology Overview of the immune system	Chapter 1, 2
2	Immunoglobulins Infection and immunity	Chapter 3, 4
3	The complement system	Chapter 5
4	<b>Exam I</b>	
5	Hypersensitivity Immunologic detection of infectious diseases	Chapter 6, 7
6	Autoimmune diseases and immunodeficiency disorders	Chapter 8
7	<b>Exam II</b>	
8	Transplant immunology Tumor immunology	Chapter 9, 10
9	Clinical Applications of flow cytometry	Chapter 11
10	<b>Exam III</b>	
11	Hybridization techniques Amplification techniques Molecular applications in cytogenetics	Chapter 12, 13, 14
	<b>Final Exam</b>	