Course Syllabus
MLAB 1235 – Immunology/Serology
Revision Date: October 28, 2014

Catalog Description: An introduction to the theory and application of basic immunology, including the immune response, principles of antigen-antibody reactions and the principles of serological procedures as well as quality control, quality assurance and safety. (5110040000)

Lecture hours = 2, Lab hours = 1

Prerequisites: Enrollment in this course and the Medical Laboratory Technology Program requires department head approval and successful completion of the admissions process. Students must be accepted into the MLT Program.

Semester Credit Hours: 2
Lecture Hours per Week: 2
Lab Hours per Week: 
Contact Hours per Semester:

State Approval Code: 5110040000

Instructional Goals and Purposes
Panola College's instructional goals include 1) creating an academic atmosphere in which students may develop their intellects and skills and 2) providing courses so students may receive a certificate/an associate degree or transfer to a senior institution that offers baccalaureate degrees.

Rationale/Introduction: MLAB 1235 Immunology/Serology is structured to meet the MLT Program goals addressing, but not limited to:
1. Develop a working knowledge of the principles and procedures of serology
2. Producing accurate, skilled clinical laboratory workers with strong ethical and professional values.
3. Promoting respect and understanding of allied health professionals through renewed understanding of the clinical laboratory technician’s role as a member of the allied health care team.
Student Learning Objectives:
Upon successful completion of this course, the student should be able to:
1. Describe the concepts of specific and nonspecific immunity
2. Describe the body’s immunological responses to preventing and combating infection.
3. Identify the structure, function, and characteristics of the different immunoglobulin classes.
4. Identify the different principles of routine serological procedures.
5. Read and correctly follow reagent package inserts to obtain valid results.
6. Evaluate laboratory test results to determine validity.
7. Perform and evaluate serological quality control as required to evaluate test validity.
8. Correlate routine serological procedures to associated diseases or conditions.
9. Recognize the limitations of each laboratory procedure performed and describe how these may affect the results of the testing performed.
10. Apply principles of safety, quality assurance and quality control in Immunology and Serology
11. Maintain a safe laboratory environment by proper handling, use and disposal of samples, reagents and equipment.
12. Demonstrate improvement in the affective traits of organizational skills, work habits, attitude, interpersonal skills, and problem-solving ability.
13. Demonstrate professionalism by:
   a. Complying with the laboratory attendance policy
   b. Complying with laboratory dress code
   c. Submitting assignments by the stated deadline
   d. Using proper grammar and respect when communicating electronically
14. Demonstrate enthusiasm and interest in the profession by asking questions, participating in class discussions and meeting with the professor during office hours as needed.
15. Demonstrate initiative by reviewing objectives and completing reading assignments prior to class.
16. Demonstrate progression in laboratory skills by effective organization, coordination of multiple tasks and insightful evaluation and interpretations of results obtained.
17. Utilizes construction criticism to correct deficiencies and improve performance.
18. Work cooperatively with the professor and fellow students to achieve the objectives of each activity assigned.
19. Participate in activities designed to advance the profession of clinical laboratory science and build professional pride.
20. Participate in activities to encourage an ongoing involvement in professional development.
Specific Course Objectives (Includes SCANS Information)

Recently the U.S. Department of Labor established the Secretary’s Commission on Achieving Necessary Skills (SCANS) to examine the demands of the workplace and whether the nation’s students are capable of meeting those demands. The Commission determined that today’s jobs generally require competencies in the following areas.

a. Resources: Identifies, organizes, plans, and allocates resources
b. Interpersonal: Works with others
c. Information: Acquires and uses information
d. Systems: Understands complex interrelationships
e. Technology: Works with a variety of technologies

The Texas Higher Education Coordinating Board is now requiring all degree plans in institutions of higher education incorporate these competencies and identify to the student how these competencies are achieved in course objectives.

Examples of SCANS competencies being incorporated are as follows:

<table>
<thead>
<tr>
<th>SCANS COMPETENCY</th>
<th>Clinical Coagulation Competencies</th>
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<tbody>
<tr>
<td>Resources</td>
<td>Identify reagents and supplies needed for each lab, organize work so that the reagents, supplies, and equipment are utilized appropriately and work is completed within a reasonable time frame.</td>
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<tr>
<td>Interpersonal</td>
<td>Recognize limitations of expertise during the performance of procedures and communicate with professor when problems arise. Maintain confidentiality of patient samples utilized. Demonstrate respect for fellow students during lab time.</td>
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<tr>
<td>Information</td>
<td>Apply knowledge gained from online lecture, laboratory and the textbook to trouble shoot and problem solve serological results obtained during student laboratory. Utilize the Internet and other library resources to acquire information about specific topics as they relate to the field of Immunology/Serology.</td>
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<tr>
<td>Systems</td>
<td>Apply critical thinking skills to clinical laboratory problems encountered, specifically, utilizing immunology principles and theories and applying these to results obtained.</td>
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Achieve competency in routine serological procedures utilizing a variety of reagents, supplies and techniques. Utilize provided procedures to obtain appropriate information for performing and trouble-shooting serological procedures, and determining clinical significance and normal values.

<table>
<thead>
<tr>
<th>Course Grade</th>
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<tbody>
<tr>
<td>Lecture Grade = 2/3 of grade</td>
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<tr>
<td>Lab Grade = 1/3 of grade</td>
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**Lecture**
- Major Exams: 50%
- Quizzes: 15%
- Homework Assignments: 20%
- Final Exam: 15%

**Laboratory**
- Pre-Lab Quizzes: 10%
- Case Assignments: 20%
- In-Lab Assignments: 20%
- Practical: 50%

**Methods of Evaluation:**
This is a mainly online course so it will require a lot of outside proactive work by the student. The instructor will provide guidance as needed. The student will be evaluated by assignments, quizzes, cases, and exams as assigned by the instructor outside of the classroom. The student will be required to come to a Panola College testing Center to take all major examinations. Laboratories will take place on three pre-determined Saturdays during the semester and will be mandatory. During the laboratories the students will be evaluated by case studies, in-lab assignments, and lab practicals as assigned by the instructor.

**Texts, Required Readings, Materials, and Supplies**

**Required:**
For current texts and materials, use the following link to access bookstore listings:
[http://www.panolacollegestore.com](http://www.panolacollegestore.com)


White Laboratory Coat

**Suggested:**
Medical Dictionary

More Information:

Laboratory Dress Code
The student will be expected to attend class clean and neatly dressed in long pants or scrubs and wear **closed-toe shoes**. A laboratory coat will must be worn snapped or buttoned up during all laboratory sessions. Hair that is shoulder length or longer must be worn up or securely tied back. Gloves must be worn when handling biological materials.

Behavioral Conduct
While a student is representing Panola College as a Medical Laboratory Technology student, they will be expected to conduct themselves in such a manner as to reflect favorably on themselves and on the Program. If a student acts in such a manner as to reflect immature judgment or disrespect for others, the student will be called before the MLT Department Chair for determination of their status in the Program. Inappropriate conduct is grounds discipline and may be cause for immediate probation or dismissal from the Program.

Academic Dishonesty
Under no circumstances shall a student submit work that is not their own. Copying answers for study questions, cheating on exams and/or submitting laboratory results which are not your own are expressly prohibited.

Time Commitment
According to “Hints on How to Succeed in College Classes” http://astrosociety.org/edu/resources/success.html you should budget your time per week for this two hour credit course as follows:
1. Reading assigned text 1 to 2 hours
2. Homework assignments 3 to 5 hours
3. Time for review and test preparation 2 hours
4. Total study time per week 6 to 9 hours **PER WEEK**

OTHER:
- For testing services, use the following link:
  http://www.panola.edu/elearning/testing.html
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Administration Building or go to http://www.panola.edu/student-success/disability-support-services/ for more information.
• Withdrawing from a course is the student’s responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.