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BIOL 301L, Microbiology Lab, Spring 2010

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Bio 301L: Microbiology Lab

Syllabus

Spring 2010

Time: Monday or Wednesday, 12:30 to 3:30pm

Course Instructor: Dr. Laura Luque de Johnson, luquedejohnsonl@rhodes.edu, phone: 843-3562

Text: Instructions for each lab will be provided electronically one week in advance

Location: FJ 113W

Date	Lab	Assignment
Week of January 11 th	No lab	
Week of January 18 th	Microscopy and Survey of Microorganisms	Assignment #1
Week of January 25 th	Aseptic techniques and Pure Culture techniques Start of Winogradsky column	Assignment #2
Week of February 1 st	Staining techniques Receive unknown	Assignment #3
Week of February 8 th	Environmental influences on the growth of microorganisms	Assignment #4
Week of February 15 th	Plaque assay	Assignment #5
Week of February 22 nd	Transformation	Assignment #6
Week of March 1 st	Exam I	
Week of March 8 th	The Winogradsky column	Assignment #7
Week of March 15 th	<i>NO LAB (Spring Break)</i>	
Week of March 22 nd	Purple Nonsulfur Photosynthetic Bacteria	Assignment #8
Week of March 29 th	Isolation of an Antibiotic Producer	Assignment #9
Week of April 5 th	Isolation of an Antibiotic Producer continues	
Week of April 12 th	Exam II	
Week of April 12 th	Identification of unknown	Assignment #10
Week of April 19 th	Identification of unknown	
Week of April 26	Written assignment on unknown due	

Weekly assignments: There will be a small assignment due after each lab session.

Exams: will have two components: 1) practical and 2) theory

Make-up labs: People enrolled on the Monday lab can only make-up labs on the Wednesday of the same week. People enrolled on the Wednesday lab can only make-up labs on the Monday of the same week.

RESPONSIBILITIES OF LAB PARTNERS

During the course of this Lab, there will be occasions where you will work in pairs. This will allow for you and your partner to help one another in performing unfamiliar procedures and in meeting difficult schedules. Confusion can occur, however, in understanding just how much help you can offer to your partner and how much you can expect in return. The following statements are intended to reduce that confusion.

1. Partners should assume an **equal share** of the work. No student should feel that his or her partner is taking advantage of the relationship. While one student may do more than 50% of the work in a particular week, because for instance of an interview or obligation in another class, the favor must be repaid in the next. If in the opinion of the instructor, any student is avoiding that responsibility, it will be brought to the student's attention; and if the pattern continues, it will be reflected in the student's grade.
2. Partners should **share in each kind of work** that it is being done. Neither student should specialize in doing all the culture inoculations, for instance, while the other always reads the results. Skills of manipulation and interpretation will be tested individually at the time of each practical, and every student needs expertise in all aspects of laboratory work.
3. The appropriate time for lab partners to cooperate in their assigned work is in performing the manipulations required to **generate and collect data**. Once the data are in hand, the relationship of one partner to the other ends. When doing the assignment or analyzing data, each partner should operate independently. Each student is solely responsible for the interpretation and presentation of data in his or her independent reports, and all independent work must clearly show that each person's process of analysis, choice of phrases, arguments, and use of references is clearly his or hers alone.

This policy is not intended to prohibit students from talking about their work with others. Exchange of ideas is an important part of science. A student having problems understanding a concept or performing a required calculation is encouraged to ask another student for help. A student with interesting results should feel free to discuss them with other students, and other students should feel free in agreeing or disagreeing over data and in offering their reasons why. All students must realize, however that while discussion is encouraged, it is quite another thing for one student to do another's thinking. If a student is unsure where the line lies, the solution is to ask the instructor for advice.

LABORATORY SAFETY GUIDELINES

The following guidelines should be followed to help ensure your safety in the microbiology laboratory.

1. Let the instructor know if you have any of the following conditions that may leave you vulnerable to infection before you come to lab: short term illness, being immunocompromised, taking immunosuppressant drugs, or being pregnant.
2. Dress appropriately for lab. No open toed shoes or sandals. Clothing with baggy sleeves that could catch fire or hinder your movements should be avoided.
3. Know where the safety equipment is in lab. Note the location of the eye wash, safety shower, and fire extinguisher and first aid kit. Take a moment to learn their operation.
4. Wash your hands prior to beginning lab and just before leaving as well. Also wash when removing gloves and if you feel you may have contaminated yourself.
5. Tie back long hair. It is both a source of contamination and a fire hazard.
6. Nothing should go into your mouth during lab. Do not smoke, eat or drink in the lab, even if no work is being done at the time.
7. Do not apply makeup and never handle contact lenses in the lab.
8. Always wear gloves when handling blood or blood products.
9. Wash with antiseptic if your skin is exposed to microorganisms as a result of a spill.
10. Dispose of broken glass and contaminated items appropriately.
11. In the event of a spill, notify your instructor immediately.
12. Disinfect your work area both before and after you use it. Keep unnecessary materials such as backpacks and textbooks off the worktable. Be sure your workspace is completely cleared when you leave and that all materials have been returned to their proper places.

I have read and understand all of the laboratory safety guidelines

Name (Print)

Signature

Date