

# MICROBIOLOGY FOR THE HEALTH SCIENCES LABORATORY

BIOM 251 - Laboratory Information and Approximate Schedule of Events – Spring, 2011

## COURSE ITEMS

- Description:** This lab introduces most of the basic techniques that are fundamental to typical microbiology laboratories. The skills that you gain in this lab should help prepare you for proper handling of microbiological samples, as well as more detailed microbiology lab work.
- Objectives:** The laboratory is intended to give you the opportunity to work with microorganisms. You will learn standard techniques used to isolate and identify microorganisms. You will also do exercises that enhance your understanding of some of the basic principles of microbiology that we discuss in lecture. In particular, I hope you will gain an appreciation for the nature of the work that takes place in a microbiology laboratory.
- Meeting:** Thursday: 2:30 pm - 5:50 pm (or until done). Although you may finish some labs early, you should plan on each lab taking 2-3 hours! Attendance for the entire lab is mandatory. Attendance and active participation are very important parts of your grade for lab. Missed labs cannot be made up!
- Text:** There is no formal lab manual. The instructor will provide lab handouts for use in lab.
- Instructor:** Michael Dennis                      Office: Sci 136                      Phone: 657-2016                      Office hours: Th, 2:00-2:30

## EVALUATION ITEMS

- Notebooks:** You will keep a detailed lab notebook for every exercise/experiment/project. The notebook will include all observations, procedures, raw data collected, as well as a discussion of the experiment. You can complete the notebook during the lab period if you are efficient. It will be turned in at the end of the semester. Your notebook will be a major part of your lab grade. It will be impossible to earn an 'A' for the lab without a top quality lab notebook. Notebooks must be organized, logical, legible, and with correct grammar and spelling. It will be easy to read, and the information will be presented in a manner such that it will be easy to follow and understand what you did, what you observed/measured, and how you interpreted your work. The exact format of the notebook is up to you, but the format and presentation must be high quality to earn an 'A' for your work. One possible format: 1) Handout, 2) Lab notes, raw data and observations, 3) Carefully prepared tables, graphs, etc, and, 4) Discussion. Include a Table of Contents at the beginning. You must do all your own work: no group notebooks!
- Assignments:** You will conduct 1-2 independent lab projects. The projects will be described at a later date. They are important parts of your lab grade. The projects will be reported as a part of your lab notebook. It will be important that you start your special projects as soon as possible.
- Grading:** Grades will be determined by the instructor and based on the following:
- |   |      |
|---|------|
| -Attendance and active participation:                                 | ~30% |
| -Techniques and quality and accuracy of data:                         | ~25% |
| -Quality of lab notebook including data presentation and discussions: | ~30% |
| -Quality of independent projects:                                     |      |
- ~15%                      -Missed labs generally reduce your overall average by ~5%.
- Grades:** Grades will be determined at the discretion of the instructor, as follows:
- A = Excellent quality lab work; thorough, clean, precise, well prepared notebook & report.
  - B = Good lab work, thorough notebook and reports.
  - C = Active participation in lab, minimal notebook and reports.
  - D = General incompetence in the lab or failure to do assigned work.
  - F = Breaking safety rules or failure to do assigned work.

## SCHEDULE OF EVENTS

13 Jan	Microscopy	10	Metabolism II
20	Microbial Diversity	17	Genetics, Special Projects
27	Culture Techniques	24	Viruses
3 Feb	Staining Techniques	31	Food Microbiology
10	Growth	7 Apr	Immunology
17	Control of Growth	14	Medical Microbiology

24  
3 Mar

Metabolism I  
HOLIDAY

21  
22

HOLIDAY  
Projects/Notebooks Due