

MMBB 155 Introductory Microbiology Laboratory

Spring 2008 – 1 Credit

Introduction: MMBB 155 Introductory Microbiology Laboratory is a course designed to complement the topics covered in the MMBB154 lecture (Introductory Microbiology). The laboratory experience is aimed at introducing non-science majors to the skills of scientific observation, interpretation, and logical conclusion that are the basis for hypothesis testing.

Tim Steffens, Lab Manager: LSS 168, 885-8953, email: tims@uidaho.edu

Teaching Assistants: Office Hours by Appointment

Section 01 Room 171 3:30-6:00 pm

Section 02 Room 170 3:30-6:00 pm

Sections 03 Room 171 7:00-9:30 pm

Section 04 Room 170 7:00-9:30 pm

Section 05 Room 167 3:30-6:00 pm

Required Materials:

1. A Laboratory Coat (Chemstores. Old oversize shirt, or Borrowed)
2. A Sharpie Marking Pen (there are some in the lab)
3. Laboratory Manual for Introductory Biology of Bacteria and Viruses Third edition author: C.H. Bohach

Grading: (600 possible points) **If you miss 2 lab meetings, unexcused, you will receive a F.**

Attendance/Participation	100 points
Lab Reports	220 points
Exam I	80 points
Exam II	100 points
Final Exam	100 points

Grade Point Spread:	90-100%	540-600 pts	A
	80-89%	480-539 pts	B
	70-79%	420-479 pts	C
	60-69%	360-419 pts	D
	≤59%	≤359 pts	F

Attendance & Participation

Attendance:	10 pts
Quizzes: 9 @ 10pts each	<u>90 pts</u>
	100 pts

- Attendance is required unless the absence is University excused. **If you miss 2 lab meetings, unexcused, you will receive a F.**
- Quizzes will be given at the beginning of each lab, excluding exam days. The quizzes will cover the material from the current week's lab, however previous lab material is fair game as you should be familiar with past concepts.

Lab Reports

Lab Reports: 11 @ 20 pts each 220 pts

Report Format: The lab reports are to be legibly written in your lab notebooks on the blank pages provided after the corresponding experiment. Notebooks will be collected on **3/5** and **5/2** and **will not** be accepted late. **DO NOT** remove any pages from your notebooks; you will turn in the entire lab notebook not just the reports. **DO NOT** type the reports; use the blank pages only.

Point Breakdown will be:

- Title:** **2pts** (Copy as written in the lab manual).
- Objective:** **4pts** (In your own words, state the overall purpose of the lab).
- Results:** **6pts** (State the results from the experiments. Graphs, tables, or charts may be cut or photographed and taped or glued neatly into this section).
- Conclusion:** **8pts** (Discuss your results and answer the questions posed in the lab manual chapter).

Unexcused, missed exams or missed assignments will count as 0 points. If you miss 2 lab meetings, unexcused, you will receive a F. Excused-exam/assignment-absence will be granted as defined by the University of Idaho General Catalog. Refer to General Requirements and Academic Procedures section M.

Academic Dishonesty. Acts of cheating or plagiarism in MMBB 155 can result in an automatic zero for that exam or assignment and can result in an automatic F as a final grade in the course. Please be aware that all parties involved in the act of cheating or plagiarism will be penalized. Cheating refers to the acquisition of answers to test questions or assigned materials in a dishonest fashion. Plagiarism is defined as 1) the use of another student's writing as your own and/or 2) the use of writing from published sources without citation. Plagiarism includes copying or paraphrasing another's writing with slight changes of wording.

Notes about the following schedule:

*The schedule does not reflect that many of the laboratory procedures require the growth of microorganisms and therefore must be completed during the following laboratory period(s). Learn to organize and schedule your lab time efficiently. Your T.A. will help orient the class at the beginning of each laboratory meeting.

** Several metabolic reactions must be observed after 24 or 48 hours, if you are unable to come into the laboratory and check your cultures the T.A. will record your results for you.

The schedule

Date	TOPIC
1/14	Introduction and Laboratory Safety The Microscope and Microscopic Observations
1/28	Examining and Transferring Microorganisms in Culture*
2/4	Culturing Microorganisms from the Environment and the body
<u>2/11</u>	<u>Exam I (80 points) material covered in the first 3 lab meetings</u>
2/18	No labs this week: University Holiday
2/25	Microbial Staining Techniques (This and the streak is one report) Streak Dilution Technique for Pure Culture
3/3	Determining Bacterial Numbers Laboratory Notebooks Due for grading Do not remove pages from Lab book
3/10	No labs: University SPRING RECESS
3/17	Using Heat to Control Microorganisms
3/24	Disinfectants and Hand Washing
<u>3/31</u>	<u>Exam II (100 Points) material in last 5 lab exercises</u> Metabolic Activity of Microorganisms 4/5 Check reactions at 24 hours [Optional]** 4/6 Check reactions at 48 hours [Optional]**
4/7	Environmental Stress and Preparation of Yogurt
4/14	Analysis of Yogurt
4/21	Finish analysis of Yogurt And Gel Electrophoresis of Bacterial Plasmid DNA.
<u>4/28</u>	<u>Final Examination (100 points) cumulative exam</u>
4/30	Laboratory Notebooks Due for final grading Do not remove pages from lab notebook

Being a Teaching Assistant in MMBB 155

As a TA you are responsible for:

1. Attending weekly TA meetings
2. Understanding the material in each laboratory exercise
3. Preparing and practicing the weekly mini-lecture you will give your class
4. Telling your class who you are and how and when you can be contacted
5. Keeping a grade book spreadsheet and sending me a copy when updated.
6. Taking weekly attendance in your class
7. Preparing any handout that you make for ALL lab sections. (see #12)

Every section must have access to all the same information

8. As a group, writing weekly quizzes
9. As a group, ordering all reagents, equipment, and cultures needed for each lab (2 weeks ahead)
10. Proctoring lecture exams (may help out depending on who is teaching 154).
11. Read your email every day.
12. Anything you handout (i.e. quizzes and tests) please get to me at least 1 week in advance for proofing.
13. Your Grade will be based on:

Effort

How Prepared

Student Interaction

Verbal Skills

**It will be your responsibility to talk to me to see how you are doing and what improvements you could do.