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BIOM 451.01: Microbial Physiology Laboratory

James D. Driver

University of Montana - Missoula, jim.driver@mso.umt.edu

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MICROBIOLOGY 451-Fall 2014

Microbial Physiology-Laboratory Schedule

Instructor: Jim Driver

Prerequisites: Micro. 300 and 6 hours of Chemistry/Biochemistry, OR Consent of Instructor

Tentative Lab Schedule (The dates and topics given below are tentative and may change at the discretion of the instructor.) 12-3 Friday

<i>Dates</i>	<i>Topics</i>
Aug 29	No lab
Sep 5	Introduction to the lab- Safety
	Physiology across the domains- Structure and Function
12	Lab 1-Isolation and Characterization of <i>Campylobacter spp</i> (from chicken skins)
19	Characterization of <i>Campylobacter spp</i>
26	Lab 2- The growth curve
Oct 3	Lab 3- Resource acquisition: Extracellular enzymes (phosphatase)
10	Completion of above labs
	Growth and Metabolism
17	Lab 4- The effect of Environment on growth
24	The effect of Environment on growth
31	Lab 5 -Adaptation to anaerobiasis
Nov 8	Adaptation to anaerobiasis (Inoculate for Lab 6)
	Regulation
14	Lab 6- Lactic Acid Fermentation
21	Lactic Acid Fermentation
Nov 29	<u>Thanksgiving (No lab)</u>

Grading

90-100 A
 80-90 B
 70-80 C
 60-70 D
 < 60 F

Lab reports - 100 pts. x 6 reports = 600 pts. (to be converted to 60 pts. total for the final grade)

Quizzes - 5 pts. x 6 quizzes = 30 pts.

Participation- 0.77 pt. x 13 labs = 10 pts.

100 pts. total

Lab Report format

Lab reports must include the following sections (100 pts. total) and will be graded accordingly:

Abstract- 10 pt.

Introduction- 15 pt.

Materials and Methods -15 pt.

Results – 30 pts.

Discussion and Conclusions– 30 pts.

Late policy

Paper copies of lab reports are due by the beginning of class on the assigned due date. Electronic copies can be e-mailed to Jim Driver on the due date by 11:59 pm that day. Paper reports can be turned into my box in HS 104 (Division of Biological Sciences office) or handed in during class. E-mail is preferred as corrections and comments can be made on the reports themselves. Late papers will be assessed a 10% per day penalty.

Quizzes

Quizzes will be given at the beginning of the first class for each lab. The quiz questions will be taken directly from the lab write-ups and questions. This is to ensure that you read the lab write-ups before coming to lab.

Laboratory Notebooks and Discussions:

You will not be graded on either laboratory notebooks or discussions. It is assumed that as senior students you know how to keep an appropriate lab notebook (record) of your experiments. However, both of these activities will have indirect impacts on your written reports.

Students who kept good lab records needed to do fewer revisions and received more points on the methods sections of their lab reports as well as

Students who participated in discussions received more points on their lab reports (generally) and the reports needed fewer revisions.