

**BIOL 346****MICROBIOLOGY LAB****Fall 2010**

**Instructor:** Craig L. Moyer  
**Grad TA:** Sean McAllister  
**Labs:** WF 11:30 - 1:20 and 2:00 - 3:50 in BI 454  
**Website:** <http://fire.biol.wvu.edu/cmoyer/cmoyer.courses.html>

**Required Manuals:**

(1) Moyer, C. L. 2010. *Microbiology Lab Manual*. Western Washington University, Bellingham, WA. Available online at class Website (Free).

Note: *You are required to have your copies of the lab(s) before each lab starts!*

(2) Leboffe, M. J. and B. E. Pierce. 2005. *A Photographic Atlas for the Microbiology Laboratory*, 3<sup>rd</sup> edition. Morton Publishing Co. ISBN: 0-89582-656-9. Available at online: <http://www.morton-pub.com/productdetails.cfm?PC=51> (\$35).

**Evaluation of Coursework:**

Lab Citizenship	20
Dilution Problems	30
Unknown #1	20
Unknown #2	40
Lab Notebook	90
Two Lab Exams @ 50 pts each	100
<u>Final Lab Exam</u>	<u>100</u>
<b>Total Points:</b>	<b>400</b>

**Please note:** Attendance is mandatory for all labs and at most only one excused absence will be allowed. In order for any absence to be considered excused, you will have to make prior arrangements with you lab TA *AND* your lab partner to make sure no work is missed. You will also be responsible for several outside of class time trips into the lab to pull culture plates from their respective incubators, to read various microbiological reactions that are time critical. These trips into the lab are especially critical during the latter class exercises.

# MICROBIOLOGY “TENTATIVE” LABORATORY SCHEDULE

WEEK	LAB DATE	EXERCISES
Week 1	Sept 22 W Sept 24 F	No labs this week
Week 2	Sept 29 W Oct 01 F	Introduction; Lab Safety Intro to Microscopy; Simple Stains; Wet Mounts & Hanging Drop Slides
Week 3	Oct 06 W  Oct 08 F	Differential Stains, Part I - Gram Stain Differential Stains, Part II - Spore Stain & Capsule Stain Dilutions; Aseptic Technique; Media Prep Isolation of Pure Cultures; Unknown #1
Week 4	Oct 13 W  Oct 15 F	Bacterial Enumeration <b>Due Date: Dilution Problems</b> Bacterial Enumeration, continued <b>Due Date: Unknown #1</b> <b>Due Date: 1<sup>st</sup> Notebook P/U</b>
Week 5	Oct 20 W Oct 22 F	Effect of Environmental Factors on Bacterial Growth Isolation of <i>Streptomyces</i> <b>Lab Exam I</b>
Week 6	Oct 27 W Oct 29 F	Selective and Differential Media Biochemical Tools for Identification of Gram+ Bacteria
Week 7	Nov 03 W Nov 05 F	Biochemical Tools for Identification of Gram– Bacteria Rapid ID Test Strips; Unknown #2
Week 8	Nov 10 W Nov 12 F	Bacterial Genetics UV Radiation <b>Lab Exam II</b>
Week 9	Nov 17 W Nov 19 F	Disinfectants & Antiseptics; Kirby-Bauer Test; Snyder Test Water Analysis; Food Microbiology <b>Due Date: Unknown #2</b>
Week 11	Dec 01 W Dec 03 F	Complete Water & Food Analyses; Clean-up & Check-out <b>Lab Final (Notebooks due)</b>