

**BIOL 346****MICROBIOLOGY LAB****Winter 2010**

**Instructor:** Craig L. Moyer  
**Grad TA:** Sean McAllister  
**Labs:** TR Noon-2 and 3-5pm 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> (\$34).

**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	Jan 05 T Jan 07 R	Introduction; Lab Safety Intro to Microscopy; Simple Stains; Wet Mounts & Hanging Drop Slides
Week 2	Jan 12 T Jan 14 R	Differential Stains, Part I - Gram Stain Differential Stains, Part II - Spore Stain & Capsule Stain
Week 3	Jan 19 T Jan 21 R	Dilutions; Aseptic Technique; Media Prep Isolation of Pure Cultures; Unknown #1 <b>Due Date: Dilution Problems</b>
Week 4	Jan 26 T Jan 28 R	Bacterial Enumeration Bacterial Enumeration, continued <b>Due Date: Unknown #1</b> <b>Due Date: 1<sup>st</sup> Notebook P/U</b>
Week 5	Feb 02 T Feb 04 R	Effect of Environmental Factors on Bacterial Growth Isolation of <i>Streptomyces</i> <b>Lab Exam I</b>
Week 6	Feb 09 T Feb 11 R	Selective and Differential Media Biochemical Tools for Identification of Gram+ Bacteria
Week 7	Feb 16 T Feb 18 R	Biochemical Tools for Identification of Gram– Bacteria Rapid ID Test Strips; Unknown #2
Week 8	Feb 23 T Feb 25 R	Bacterial Genetics UV Radiation <b>Lab Exam II</b>
Week 9	Mar 02 T Mar 04 R	Disinfectants & Antiseptics; Kirby-Bauer Test; Snyder Test Water Analysis; Food Microbiology <b>Due Date: Unknown #2</b>
Week 10	Mar 09 T Mar 11 R	Complete Water & Food Analyses; Clean-up & Check-out <b>Lab Final (Notebooks due)</b>