

**BIOL 346****MICROBIOLOGY LAB****Fall 2012**

**Instructor:** Craig L. Moyer  
**Grad TA:** Kelsey Jesser  
**Labs:** WF Noon - 2:00pm and 2:30 - 4:30pm in BI 454  
**Website:** <http://fire.biol.wvu.edu/cmoyer/cmoyer.courses.html>

**Required Manuals:**

(1) Moyer, C. L. 2012. *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. 2011. *A Photographic Atlas for the Microbiology Laboratory*, 4<sup>th</sup> edition. Morton Publishing Co. ISBN: 0895828723. Available at online: <http://www.morton-pub.com/index.cfm> (Click on Life Science, then Microbiology; \$40).

**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 your 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
<b>Week 1</b>	Sept 26 W Sept 28 F	Introduction; Lab Safety Intro to Microscopy; Simple Stains; Wet Mounts
<b>Week 2</b>	Oct 03 W Oct 05 F	Differential Stains, Part I - Gram Stain Differential Stains, Part II - Spore Stain & Capsule Stain
<b>Week 3</b>	Oct 10 W Oct 12 F	Dilutions; Aseptic Technique; Media Prep Isolation of Pure Cultures; Unknown #1
<b>Week 4</b>	Oct 17 W  Oct 19 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>
<b>Week 5</b>	Oct 24 W Oct 26 F	Effect of Environmental Factors on Bacterial Growth Isolation of <i>Streptomyces</i> <b>Lab Exam I</b>
<b>Week 6</b>	Oct 31 W Nov 02 F	Selective and Differential Media Biochemical Tools for Identification of Gram+ Bacteria
<b>Week 7</b>	Nov 07 W Nov 09 F	Biochemical Tools for Identification of Gram- Bacteria Rapid ID Test Strips; Unknown #2
<b>Week 8</b>	Nov 14 W Nov 16 F	Bacterial Genetics UV Radiation <b>Lab Exam II</b>
<b>Week 10</b>	Nov 28 W Nov 30 F	Disinfectants & Antiseptics; Kirby-Bauer Test; Snyder Test Water Analysis; Food Microbiology <b>Due Date: Unknown #2</b>
<b>Week 11</b>	Dec 05 W Dec 07 F	Complete Water & Food Analyses; Clean-up & Check-out <b>Lab Final (Notebooks due)</b>