

Microbiology Laboratory Schedule

Laboratory Instructors: Dr. Heather Fullerton
Ms. Tracy Hirsch

Required books

1. Laboratory Manual: Leboffe & Pierce, Microbiology Laboratory Theory & Application, Brief, 3rd edition
2. Textbook: Brock Biology of Microorganisms, 15th edition

Items listed as *exercise* are in the Laboratory Manual. You will also be required to read specific pages from the manual and from the textbook.

Required Laboratory Materials

1. Bound Lab Notebook (No spiral notebooks)
2. Sharpie Marker (Preferably black)
3. Safety Glasses
4. Lab Coat

Tentative Weekly Lab Schedule

Week 1 (Aug. 22 - 23)

No Labs

Week 2 (Aug. 28 - 30)

Safety Overview	Read Introduction (Pages 1-8)
Aseptic Techniques	Exercise 1-4
Ubiquity of Microorganisms	Exercise 2-1
Microscope Introduction	Read Brock sections 1.5-1.6 Exercise 3-1

Week 3 (Sept 4 - 6)

Streak Plate Method	Exercise 1-5
Standard Plate Count	Exercise 6-2
Calibration of the Ocular Micrometer	Read exercise 3-2
Colony Morphology	Exercise 2-2 (Describe colonies from exercise 2-1)
Bacterial Structure & Simple Stains	Read page 173-176 Exercise 3-4
Nutrient Broth & Agar Prep	Read exercise 1-3 Read Brock sections 3.1 Read Brock section 5.5

Week 4 (Sept 11 - 13)

Gram Stain	Exercise 3-6
Endospore Stain	Exercise 3-9
Bacterial Motility: Wet mount & Hanging Drop Preparations	Exercise 3-10

Motility Agar	Exercise 5-24
Microbial Locomotion	Read Brock sections 2.11-2.12
Unknown Gram Stain	

Week 5 (Sept 18 - 20)

Isolation of Aerobic Spore-Forming Organisms	Handout
Fluid Thioglycollate Broth	Read Manual Page 95 (Aerotolerance) Exercise 2-6
Anaerobic Jar	Read Exercise 2-7
<i>The effect of Temperature on Microbial Growth</i>	<i>Exercise 2-8</i>
<i>The effect of pH on Microbial Growth</i>	<i>Exercise 2-9</i>
Population Growth	Read Brock sections 5.2-5.3

Week 6 (Sept 25 - 27)

Antimicrobial Susceptibility Test	Exercise 7-2 Read Brock sections 28.10, 28.12
Epidemic Simulation	Exercise 7-4
Effect of Ultraviolet Radiation on Microbial Growth	Exercise 2-12
Unknown Streak Plate	

Week 7 (Oct. 2 - 2)

Lab Midterm

Week 8 (Oct. 9 - 11)

Selective & Differential Media	Read Manual pg 227-229
Columbia CNA with 5% Sheep Blood Agar	Exercise 4-2
Mannitol Salts Agar	Exercise 4-3
Blood Agar	Read exercise 5-21
Catalase Test	Exercise 5-4
Lactic Acid Bacteria	Handout
Snyder Test	Read exercise 7-1

Week 9 (Oct. 16 - 18)

Fall Break - No Labs

Week 10 (Oct. 23 - 25)

Differential Tests	Read Manual pg 267-270
MacConkey Agar	Exercise 4-4
Eosin Methylene Blue Agar	Exercise 4-5
Hektoen Enteric Agar	Exercise 4-6
Oxidase Test	Exercise 5-5
Starch Hydrolysis	Exercise 5-10

Week 12 (Nov. 6 - 8)

Phenol Red Fermentation Broth	Exercise 5-2
Methyl Red & Voges-Proskauer Tests	Exercise 5-3
Citrate Test	Exercise 5-7
Urea Hydrolysis	Exercise 5-15
Triple Sugar Iron	Exercise 5-19
Sign up for food item in lab	

Week 11 (Oct 30. - Nov. 1)

Membrane Filter Technique	Exercise 7-5
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Week 13 (Nov. 13 - 15)

api 20 E Identification System	Exercise 9-4
Food Microbiology	Handout Read Brock 32.6-32-10

Week 14 (Nov 20 - 22)**Thanksgiving Break****Week 15 (Nov 27 - 29)****Lab Final**