

**GENERAL & MEDICAL MICROBIOLOGY LABORATORY**  
Spring Semester 2015

<b>Day</b>	<b>Date</b>	<b>Lab #</b>	<b>Lab Exercises</b>
M/T	Feb. 2/3		Introduction and Safety
W/Th	Feb. 4/5	1	Ubiquity of Microorganisms Microscopy
M/T	Feb. 9/10	2	Simple Stains: Direct and Negative Morphological Unknown: Direct stain
W/Th	Feb. 11/12	3	Differential Stains: Cell Wall (Gram and Acid-Fast) Morphological Unknown: Gram and Acid-Fast stain
M/T	Feb. 16/17	4	Differential Stains: Cell Structures (Endospore and Capsule) Morphological Unknown: Endospore Stain
W/Th	Feb. 18/19	5	Aseptic Technique Cultivation of Bacteria: Culture Media/Nutritional Requirements Enumeration of Bacteria: Standard Plate Count
M/T	Feb. 23/24	6	Cultivation of Bacteria: Pure Culture/Streak Plate Environmental Influences: Temp., Osmotic Pressure and pH
W/Th	Feb. 25/26	7	Microbial Diversity and Ecology: Bioluminescence and the Winogradsky Column ( <i>Pipetmen</i> )
M/T	March 2/3	8	Control of Microbial Growth: UV and Antibiotics Bacterial Genetics: Isolation of Drug Resistant Mutants
W/Th	March 4/5	9	Control of Microbial Growth: Disinfectants and Antiseptics Effectiveness of Antiseptics in Hand Washing Bacterial Genetics: Isolation of Drug Resistant Mutants (cont.)
M/T	March 9/10	10	Bacterial Genetics: Transformation
		11	Bacteriophage: Isolation
W/Th	March 11/12	12	Bacteriophage: Titering a Phage Suspension <b>Skill Tests #1 – complete by Friday, March 13</b>
M/T	March 16/17		NO LAB – Spring Break
W/Th	March 18/19		NO LAB – Spring Break
M/T	March 23/24	13	Fungi

<b>Day</b>	<b>Date</b>	<b>Lab #</b>	<b>Lab Exercises</b>
W/Th	March 25/26	15	Enzyme-Mediated Biochemical Activities of Bacteria: Physiological Testing for Identification
M/T	March 30/31	16	Enzyme-Mediated Biochemical Activities of Bacteria: Physiological Testing for Identification
W/Th	April 1/2	17	Complete Physiological Testing for Identification Unknown: Gram Stain and Streak for Isolation
M/T	April 6/7	18	Unknown: Gram Stain and Prepare Reserve and Working Stocks Food Microbiology: Preparation of Wine
W/Th	April 8/9	19	Unknown: Biochemical Testing
M/T	April 13/14	20	Unknown: Biochemical Testing The Rapid KOH String Test
W/Th	April 15/16	21	Genomics and the Application of Computer-Based Nucleotide Sequence Searches for Identification of Unknown Bacteria and their Phylogenetic Relationships Complete Unknown: Identification
M/T	April 20/21	22	Immunology
W/Th	April 22/23	23	Water Microbiology: PA test, Membrane Filtration and MTFM
M/T	April 27/28	24	Soil Microbiology: Enrichment of <i>Azotobacter</i> and Enumeration Water Microbiology (cont.)
W/Th	April 29/30	25	Food Microbiology: Natural Antimicrobials in Food
M/T	May 4/5	26	Food Microbiology: Preparation of Yogurt (clean up)
		27	<b>Skill Tests #2 – Complete by Friday, May 8<sup>th</sup></b>