

MCB 3020L **Instructors: Chinmayee Bhedi, Arita Chatterjee, Zehadee Momtaz, Falguni Paul**

Manual: *Microbiology Laboratory Manual*, by Drs. John Makemson and Laurie Richardson
 – **available on Blackboard**

Date		Experiment	
Jan	10	Introduction, laboratory rules and safety; quiz on rules and safety	
Jan	12	Expt. 1	How to use the microscope
		Expt. 2	Set up Winogradsky column
Jan	17	Expt. 3	Gram stain
Jan	19	Expt. 4	Spore stain and acid fast stain
Jan	24	Expt. 5	Isolation of a pure culture
Jan	26	Expt. 5	Viable titer
Jan	31	Expt. 5	Continued
Feb	2	Expt. 6	Determination of phenotype – part 1
Feb	7	Expt. 6	Determination of phenotype – part 2
Feb	9	Expt. 6	Determination of phenotype – part 3
Student presentations – what environmental bacterium will you try to culture and why?			
Feb	14	Expt. 7	Enrichment – preparation of general and selective media
Feb	16	Expt. 7	Continued - inoculation of media
		Expt. 8	Microalgae <i>Chlamydomonas</i> mating strains
Feb	21	Expt. 7	Continued - subculturing and isolations
Feb	23	Expt. 7	Continued - gross characterization of isolates
Feb	28	Expt. 9	Chemotaxis – Adler capillary assay; inoculate plates Calculating concentrations of potential attractants
Mar	2	FIRST LABORATORY EXAM – 30 minutes	
		Expt. 9	Plate counting for chemotaxis experiment (inoculate plates)
Mar	7	Expt. 10	Bacteriophage – enrichment using <i>E. coli</i>
	9	Expt. 10	Continued – inoculation of different strains of bacteria
Mar	14, 16	Spring break – no labs	
Mar	21	Expt. 10	Continued – examination of phage plates
		Expt. 11	Quorum sensing – inoculation of plates
		Expt. 12	Human symbiotic bacteria – sampling and inoculation

Mar 23 Expt. 11 Continued - examination of plates
 Expt. 12 Continued - subculturing and begin characterization

Mar 28 Expt. 12 Continued
 Mar 30 Expt. 12 Continued

April 4 Expt. 13 Diatom lab
 April 6 Expt. 2 Continued (Winogradsky column) – enrichment for Purple Sulfur Bacteria

April 11 Expt. 14 Antibiotics – Kirby Bauer Assay
 April 13 Expt. 14 Continued
 Expt. 2 Continued – examination of enrichments and microscopic confirmation

April 18 Clean up lab and review for exam
 April 20 **SECOND LABORATORY EXAM (CUMULATIVE FOR COURSE)**

Assignment	Point Value	Total Value
Lab Reports (12)	5	60
Oral Presentation	10	10
Midterm Exam	25	25
Final Exam	50	50
Quizzes (20)	5	100
Total		245

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