

MCB 3020L Instructors: Falguni Paul, TBD

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

Date	Experiment
Aug 21	Introduction, laboratory rules and safety; quiz on rules and safety
Aug 23	Expt. 1 How to use the microscope Expt. 2 Set up Winogradsky column
Aug 28	Expt. 3 Gram stain
Aug 30	Expt. 4 Spore stain and acid fast stain
Sep 4	Expt. 5 Isolation of a pure culture
Sep 6	Expt. 5 Viable titer
Sep 11	Expt. 5 <i>Continued</i>
Sep 13	Expt. 6 Determination of phenotype – part 1
Sep 18	Expt. 6 Determination of phenotype – part 2
Sep 20	Expt. 6 Determination of phenotype – part 3 Student presentations – what environmental bacterium will you try to culture and why?
Sep 25	Expt. 7 Enrichment – preparation of general and selective media
Sep 27	Expt. 7 <i>Continued</i> - inoculation of media
Oct 2	Expt. 7 <i>Continued</i> - subculturing and isolations
Oct 4	Expt. 7 <i>Continued</i> - gross characterization of isolates
Oct 9	Expt. 9 Chemotaxis – Adler capillary assay; inoculate plates Calculating concentrations of potential attractants
Oct 11	FIRST LABORATORY EXAM – 30 minutes Expt. 9 Plate counting for chemotaxis experiment (inoculate plates)
Oct 16	Expt. 10 Bacteriophage – enrichment using <i>E. coli</i>
Oct 18	Expt. 10 <i>Continued</i> – inoculation of different strains of bacteria
Oct 23	Expt. 10 <i>Continued</i> – examination of phage plates Expt. 11 Quorum sensing – inoculation of plates Expt. 12 Human symbiotic bacteria – sampling and inoculation
Oct 25	Expt. 11 <i>Continued</i> - examination of plates Expt. 12 <i>Continued</i> - subculturing and begin characterization
Oct 30	Expt. 12 <i>Continued</i>

Nov 1 Expt. 12 *Continued*

Nov 6 Expt. 8 Microalgae *Chlamydomonas* mating strains

Nov 8 Expt. 2 *Continued* (Winogradsky column) – enrichment for
Purple Sulfur Bacteria

 Expt. 13 Antibiotics – Kirby Bauer Assay

Nov 13 Expt. 13 *Continued*

Nov 15 Expt. 2 *Continued* – examination of enrichments and microscopic
confirmation

Nov 20 Clean up lab and review for exam

Nov 27 **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

"Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook."