Biology 409
Cellular Physiology Laboratory
Spring, 2000

Instructor: Dr. Ann M. Findley
Office: CNSB 327
Telephone: 342-1817
Office Hours: As posted, or by appointment

Textbook: There is no assigned text for the laboratory. However, you will receive detailed handouts of laboratory protocols and relevant reference material will be available for student use.

Objectives: This course presents an introduction to practical techniques commonly employed in the study of cellular and molecular biology. Students will work individually and in collaborative groups to examine experimental design, to develop laboratory skills, and to record, analyze and interpret experimental data.

Grading Protocol: Your grade in this course will be largely determined by your participation in laboratory activities and subsequent written assignments. Written assignments will include data presentation and exploratory questions, the development of experimental protocols (flowcharts), and the preparation of short laboratory reports.

Data presentation/exploratory follow-up questions	100 pts
Experimental protocols/flowcharts/technique overviews	100 pts
Laboratory reports (5)	200 pts
Participation/presentation	50 pts
TOTAL	450 pts

Grading scale: 90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; 0-59% = F

Laboratory units: A set of experiments will be conducted to explore each of the following subject areas:

Macromolecular structure/function – chemical properties; DNA → protein; primordial soup
Organelle function/cell transport – mitochondria; CM dynamics
Enzyme kinetics - effects of T, pH, [E], [S]
Metabolism
Molecular biology – transformation (pGLO); GFP purification; size exclusion chromatography; restriction digestion/analysis; DNA fingerprinting; PCR analysis