

Text: BSC1005L South Campus General Biology Laboratory Manual.

Required materials:

Lab Coat (full length) - [paper coats are acceptable]

Safety Goggles

LAB SCHEDULE
GENERAL BIOLOGY LABORATORY (BSC 1005L)

Date	Lab #	Title and Topics
August 22, 23	1	<u>Introduction to Lab and Lab Safety</u> Laboratory operations and routine; evaluation, grading, and safety practices.
August 29, 30	2	<u>Microscopes</u> (VIDEO: <i>Microscopes</i>) Compound monocular and stereomicroscopes, microscope technique, metric measurement.
September 12, 13	3	<u>The Scientific Method</u> Design an experiment using the scientific method to collect and analyze data.
September 19, 20	4	<u>Cell Chemistry</u> Amino acids, chromatography, molecular models, glucose and other carbohydrates, acids-bases-salts, pH.
September 26, 27	5	<u>Enzymes</u> Protein structure, denaturation, enzyme-substrate specificity, hydrolysis, effect of pH.
October 3, 4	6	<u>The Cell Membrane</u> Brownian movement, diffusion, osmotic pressure, selective permeability of nonliving and living membranes.
October 10, 11	7	<u>Bacteria</u> Sterile technique, bacterial nutrition, culture methods, antiseptics and antibiotics, staining and bacterial morphology.
October 17, 18	8	<u>Complex Single Cells-Protozoa</u> Heterotrophic life, <i>Paramecium</i> : Structure and function, locomotion, organelles, feeding, and digestion, contractile vacuoles and diffusion, reproduction.
October 24, 25	9	<u>Cell Ultrastructure</u> Homogenization, filtration, and centrifugation of cellular components, microscopic and biochemical analysis of cellular organelles.
October 31, November 1	10	<u>Reproduction, Molecular to Cellular</u> (VIDEO: <i>Cell Division-Mitosis and Cytokinesis</i>) DNA Replication, mitosis, and squash technique for chromosomes.
November 7, 8	11	<u>Growth and Development</u> (VIDEO: <i>Sea Urchin Development</i>) Fertilization, cleavage, and differentiation in echinoderm embryos. <u>*(Drosophila Cross)</u>
November 14, 15	12	<u>Heredity</u> Probability and genetic ratios in corn; blood type, tongue rolling, and PTC testing in man.
November 21, 22	13	<u>Inheritance in Drosophila</u> Culture and handling methods for the fruit fly, inheritance of vestigial wings and white-eye color, sex linkage.
November 28, 29	14	<u>Rock Pocket Evolution</u> A data collection and analysis lesson that examines selection for coat color in pocket mouse populations on different color substrates over time. Students analyze amino acid data and draw conclusions about the evolution of coat color phenotypes in different rock pocket mouse populations.

****Important dates:**

September 5 - No classes- Labor Day

September 6 – No BSC1005L-MWC only

October 26 - Last Day to Withdraw or Change to/from Audit

STUDENTS ARE REQUIRED TO PURCHASE A LAB MANUAL FOR THE FIRST LAB.

Lab website: <https://sites.broward.edu/science-wellness-miramar/>