BSC 1005L **Session 1** ***(Term 20242)***

(South Campus)

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
January 8	1	**Introduction to Lab and Lab Safety** Laboratory operations and routine; evaluation, grading, and safety practices.
January 22	2	**Microscopes** (VIDEO: *Microscopes)* Compound monocular and stereomicroscopes, microscope technique, metric measurement.
January 29	3	**The Scientific Method** Design an experiment using the scientific method to collect and analyze data.
February 5	4	**Cell Chemistry** Amino acids, chromatography, molecular models, glucose and other carbohydrates, acids-bases-salts, pH.
February 12	5	**Enzymes** Protein structure, denaturation, enzyme-substrate specificity, hydrolysis, effect of pH.
February 19	6	**The Cell Membrane** Brownian movement, diffusion, osmotic pressure, selective permeability of nonliving and living membranes.
February 26	7	**Bacteria** Sterile technique, bacterial nutrition, culture methods, antiseptics, and antibiotics, staining and bacterial morphology.
March 11	8	**Complex Single Cells-Protozoa** Heterotrophic life, *Paramecium:* Structure and function, locomotion, organelles, feeding, and digestion, contractile vacuoles and diffusion, reproduction.
March 18	9	**Cell Ultrastructure** Homogenization, filtration, and centrifugation of cellular components, microscopic and biochemical analysis of cellular organelles.
March 25	10	**Reproduction, Molecular to Cellular (**VIDEO: *Cell Division-Mitosis and Cytokinesis)* DNA Replication, mitosis, and squash technique for chromosomes.
April 1	11	**Growth and Development** (VIDEO: *Sea Urchin Development)* Fertilization, cleavage, and differentiation in echinoderm embryos. ****(Drosophila Cross)***
April 8	12	**Heredity** Probability and genetic ratios in corn; blood type, tongue rolling, and PTC testing in man.
April 15	13	**Inheritance in Drosophila** Culture and handling methods for the fruit fly, inheritance of vestigial wings and white-eye color, sex linkage.
April 22	14	**Rock Pocket Evolution** 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:**

January 15 – No classes-Martin Luther King, Jr. Day

March 4-10- No classes-Spring Break

March 22 - 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/