BIOL 101 L Principles of Biology Lab

BIOL 101 L is designed to reinforce topics presented in BIOL 101 lectures. Through scientific experimentation, students will improve their understanding of basic concepts in biology: cells, macromolecules, energy flow, genetics and inheritance, evolution and biodiversity, and ecology. *(Pre-requisites: BIOL 101)*

Course Learning Outcomes:

By the end of the course, students will be able to:

1. Understand the structure and function of cells and macromolecules; cellular functions, processes and products of reproduction; DNA and patterns of inheritance; the evolution of populations and biological diversity
2. Use scientific criteria to evaluate studies and visualize data to reach reliable conclusions
3. Communicate ideas and solutions from scientific experiments in written and oral form
4. Work in teams on scientific experiments

Textbook & Course Materials:

- *Thinking about Biology: An Introductory Lab Manual* by Bres and Weisshaar, 6th edition (Pearson)

Course Content:

1. Scientific Method
2. Organic Molecules and Nutrition
3. Functions and Properties of Cells
4. Osmosis
5. Photosynthesis
6. Enzyme Activity
7. Introduction to Mendelian Genetics
8. Building your own DNA Helix
9. Ecosystems and Food Webs