

Los Angeles Valley College
Course Level Student Learning Outcomes (SLO)

Course Name and Number: Biology 3: Introduction to Biology

Course Objectives: (List the course objectives as they appear in the course outline of record.)

Explain the Scientific Method; form a hypothesis and design an experiment with controls.

Discuss the principles of general biology.

Identify the organelles of plant and animal cells and discuss their functions.

Identify the major components of the cell membrane and cytosol and their respective properties. Identify their major functions in cells.

Apply course content to everyday life using observations and critical thinking.

Discuss the diversity of plants and animals on earth and how they interact from a ecological and evolutionary perspective.

Differentiate between different animal phyla, be able to design and use an animal classification key.

Compare the DNA double helix to the RNA structure and describe the functions of each molecule.

Differentiate between common ecosystems and propose how population growth affects these ecosystems.

Explain how biotechnology and genetic engineering are improving our human health system.

Use the scientific method to set up a biological experiment.

Build simple chemical models & DNA.

Use the compound and dissecting microscopes to accurately observe, microscopic organisms.

Be able to dissect a flower and identify trees using a leaf key.

Explain the fertilization process.

List and describe the common ecosystems in Southern California.

Dissect an owl pellet and identify the main bones in the pellet.

Solve basic genetics problems using Punnett square method to solve dihybrid and monohybrid crosses.

Demonstrate how to use an animal key to identify the correct phyla of unknown species of animals.

Dissect a flower and describe the function of each part and explain how fertilization takes place.

Identify the primary human animal tissues with use of the microscope and identify the bones of the human skeleton.

Use and accurately read measuring instruments such as scales, flasks, pipettes and graduated cylinders.

Restate and apply the principles of cellular transport, such as diffusion, osmosis and active transport as they relate to living organisms.

Establish 1–2 course level student learning outcomes and indicate how each SLO will be assessed.

Course Level Student Learning Outcome	Assessment Measure
Students will have acquired skills necessary to analyze issues associated with biotechnology.	Evidence that students have mastered this SLO will be provided by a written response to biotech questions presented during class discussion. A rubric will be developed to assess these responses.
Students will distinguish various forms of organismal diversity.	Evidence that students have mastered this SLO will be provided by laboratory investigations that require sketching of representative organisms in different species. A rubric will be developed to assess laboratory reports.