LEARNING OUTCOMES: MOLECULAR & CELLULAR BIOLOGY, BSLAS

Learning Outcomes for the degree of Bachelor of Science in Liberal Arts and Sciences Major in Molecular & Cellular Biology

Upon successful completion of the Molecular & Cellular Biology undergraduate curriculum, students will be able to:

1. understand and appreciate the diversity of life as it evolved over time by processes of mutation, selection and genetic change.
2. illustrate that fundamental structural units define the function of all living things.
3. explain that the growth, development, and behavior of organisms are activated through the expression of genetic information in context.
4. summarize that biological systems grow and change by processes based upon chemical transformation pathways and are governed by the laws of physics.
5. illustrate that living systems are interconnected and interacting across scales of space and time.
6. design a scientific process and employ the scientific method, demonstrating that biology is evidence based and grounded in the formal practices of observation, experimentation, and hypothesis testing.
7. execute quantitative analysis to interpret biological data.
8. construct and utilize predictive models to study and describe complex biological systems.
9. apply concepts from other sciences in order to interpret biological phenomena.
10. communicate biological concepts and understanding to members of a diverse scientific community as well as to the general public.
11. identify social and historical dimensions of biological investigation.

Information listed in this catalog is current as of 01/2021