Learning Outcomes for the B.S. in Biomolecular Sciences Program.

By the time of graduation, a student

1. Biomolecular Sciences majors will be able to demonstrate foundational knowledge in Biomolecular science, including an understanding of:
   a. The relationship between the properties of macromolecules and cellular activities,
   b. The relationship between cellular activities and biological responses,
   c. Cell metabolism, chemical composition, physiochemical and functional organization of organelles,
   d. Gene replication, expression, regulation and mutation,
   e. Cell signaling, trafficking and differentiation, and
   f. Contemporary approaches and techniques used in modern cell and molecular biology.

2. Biomolecular Sciences majors will be able to evaluate, summarize and critique papers from the scientific literature.

3. Biomolecular Sciences majors will be able to develop a research question and discuss and evaluate approaches to address that question.

4. Biomolecular Sciences majors will be able to design and conduct a research project under the guidance of a faculty member, including data collection, evaluation, and presentation in an oral or written format.

Learning Outcomes for the M.A. in Biomolecular Sciences Program.

1. Graduate students will demonstrate knowledge in Biomolecular science, including an understanding of: a) The connection between molecular properties and cellular activities; b) The connection between cellular activities and biological responses; c) Cellular structure and function, including chemical composition, physiochemical and functional organization of organelles, and basic cellular metabolism; d) Major cellular processes, including DNA replication, gene regulation, protein structure and function, cell signaling, and differentiation; and e) Contemporary techniques used in cell and molecular biology

2. Graduate students will evaluate papers from the scientific literature and present oral and written critiques.

3. Graduate students will develop research questions and the approach they will use to address that question.

4. Graduate students will do a research project, analyze and evaluate the data generated and present their findings in both an oral and written format.