BIOLOGY, B.S. (BEHREND)

Begin Campus: Any Penn State Campus

End Campus: Erie

Program Learning Objectives

• **Apply Physical Laws:** Students will be able to apply physical laws to biological dynamics.

• **Apply Statistics:** Students will be able to apply statistical methods to diverse data.

• **Biological Structures:** Students will be able to articulate and explain for multiple levels of the biological hierarchy the physical and chemical characteristics of biological structures influence their function.

• **Chemistry:** Students will understand the relationship of the chemistry of molecules to biological systems.

• **Communicate:** Students will be able to communicate ideas and results of experiments and research effectively both orally and in writing.

• **Data Visualization:** Students will be able to develop and interpret graphs.

• **Design:** Students will be able to design scientific processes to understand living systems.

• **Develop Biological Applications:** Students will be able to develop biological applications to solve societal problems.

• **Energy and Matter:** Students will be able to articulate and explain for multiple levels of the biological hierarchy that organisms captures and transform energy and matter.

• **Evolution:** Students will be able to articulate and explain for multiple levels of the biological hierarchy that evolution explains the diversity and unity of life.

• **Literature:** Students will be able to search for, acquire, and interpret original scientific literature.

• **Model:** Students will be able to computationally model dynamic systems.

• **Organisms:** Students will be able to articulate and explain for multiple levels of the biological hierarchy that organisms store and process information.

• **Systems:** Students will be able to articulate and explain for multiple levels of the biological hierarchy that biological systems are complex and hierarchical.