2022-2023 Biochemistry and Biophysics Concentration Worksheet

Major in Biological Sciences

*Our Biochemistry & Biophysics Concentration is not available if a student is also doing a Biochemistry concentration within the Chemistry major.

To complete this concentration, Biological Sciences Majors may choose any 3 of the following courses:

☐ **BIOL_SCI 323-0** **Bioinformatics: Sequence and Structure Analysis** - Use of informational and modeling techniques to explore evolutionary and other problems related to the genome. *Prereqs: BIOL_SCI 241-0 OR BIOL_SCI 301-0.*

☐ **BIOL_SCI 338-0** **Modeling Biological Dynamics -** Mathematical and computational techniques for analyzing and predicting biological dynamics. *Prereqs: at least one of MATH 218-1, 220-1, 240-0, STAT 202-0, BIOL_SCI 337-0, OR equivalent.*

☐ **BIOL_SCI 353-0** **Molecular Biology Laboratory** - Project-based approach to learning lab skills in eukaryotic molecular biology. *Prereqs: BIOL_SCI 201-0 OR 215-0; BIOL_SCI 202-0 OR 219-0; BIOL_SCI 222-0 or 234-0 and BIOL_SCI 301-0.*

☐ **BIOL_SCI 360-0** **Principles of Cell Signaling** - Emphasis on principles, components, and logic that are common to different cell signaling systems. Modern experimental strategies for studying cellular signaling as well as the implications of disrupting cell communication pathways in disease will be described. *Prereqs: BIOL_SCI 203-0 OR 215-0; BIOL_SCI 202-0 OR 219-0.*

☐ **BIOL_SCI 361-0** **Protein Structure and Function** - Structure and function of proteins; x-ray crystallography and NMR. *Prereq: BIOL_SCI 301-0.*

☐ **BIOL_SCI 363-0** **Biophysics** - Protein interaction with small molecules; protein tertiary structure determination. *Prereqs: BIOL_SCI 203-0 OR 215-0, BIOL_SCI 202-0 OR 219-0; BIOL_SCI 301-0*