

## **Bioinformatics Electives**

### **Biology -**

BIOL 3125 - Molecular Tools for Evolutionary and Population Biology

BIOL 3205 - General Microbiology Laboratory

BIOL 3210 - General and Pathogenic Microbiology

BIOL 3240 - Introduction to Cellular Neurobiology

BIOL 3310 - Comparative Vertebrate Morphology

BIOL 3315 - Comparative Vertebrate Morphology Laboratory

BIOL 3320 - Comparative Physiology

BIOL 3330 - Behavioral Neurobiology

BIOL 3340 - Introduction to Plant Biology

BIOL 3350 - Physiology of Plants

BIOL 3370 - Microbial Biology

BIOL 3410 - Ecology and Evolution

BIOL 3430 - Animal Behavior

BIOL 3470 - Conservation Biology

BIOL 3485 - Conservation Biology Field Lab

BIOL 3515 - Biological Chemistry Laboratory

BIOL 3520 - Biological Chemistry II

BIOL 3525 - Molecular Biology of DNA Lab

BIOL 3665 - Form, Function, and Adaptation in Animals

BIOL 3960 - Special Topics in Biology

BIOL 4955 - Individual Research

BIOL 4965 - Independent Professional Internship

BIOL 4999 - Honors Thesis/Project

BIOL 5011 - Mathematical Biology I

BIOL 5120 - Gene Expression

BIOL 5210 - Cell Structure and Function

BIOL 5255 - Prokaryotic Genetics

BIOL 5275 - Microbial Diversity, Genomics and Evolution

BIOL 5425 - Advanced Ecology Lab

BIOL 5440 - Urban Ecology

BIOL 5455 - Desert Field Ecology

BIOL 5460 - Plant Ecology in a Changing World

BIOL 5480 - Entomology

BIOL 5485 - Entomology Laboratory

BIOL 5495 - Biophysical Ecology

BIOL 5510 - Genes, Development, and Evolution

BIOL 5570 - Ecology and Evolution of Parasites and Pathogens

BIOL 5575 - Ecology and Evolution of Parasites and Pathogens Lab

BIOL 5665 - Computational Paleobiology

BIOL 5910 - Mathematical Models in Biology

BIOL 5920 - Advanced Eukaryotic Genetics

Updated 07/24/2024

BIOL 5960 - Advanced Special Topics in Biology

**Math -**

MATH 2210 - Calculus III

MATH 2280 - Introduction to Differential Equations

MATH 2281 - Enhanced Introduction to Differential Equations

MATH 4600 - Mathematics in Physiology and Medicine

MATH 5010 - Introduction to Probability

MATH 5040 - Stochastic Processes and Simulation I

MATH 5050 - Stochastic Processes and Simulation II

MATH 5075 - Time Series Analysis

MATH 5080 - Statistical Inference I

MATH 5090 - Statistical Inference II

MATH 5110 - Mathematical Biology I

MATH 5410 - Introduction to Ordinary Differential Equations

MATH 5600 - Survey of Numerical Analysis

MATH 5610 - Introduction to Numerical Analysis I

MATH 5770 - Introduction to Optimization

**\*Only one of the following courses can be used to fulfill Electives Requirements:  
MATH 2280 OR MATH 2281**

**Mining Engineering –**

MG EN 5530 - Computational Intelligence