Interdisciplinary Concentration in Bioinformatics

The Bioinformatics Concentration is offered to students majoring in Biology, Mathematics, and Computer Science. Please note that courses in this concentration may overlap with major or minor requirements. In addition, a semester of bioinformatics research within a lab can be substituted for either one of the three additional computer science courses or the computational biology course. Students wishing to pursue this option should visit the Biology Department (Higgins 355E) for course approval.

Course Requirements

☐ **BIOL 2000 Molecules and Cells** or **BIOL 3150 Introduction to Genomics** or **BIOL 3050 Genetics** or equivalent

☐ **One of the following statistics courses:**
- BIOL 2300 Biostatistics
- CSCI 2244 Randomness and Computation
- ECON 1151 Statistics
- MATH 4426 Probability
- MATH 4427 Math Statistics
- PHCG3560 Biostatistics, Data Analytics and Quantitative Methods in Public Health

☐ **BIOL 4200 Introduction to Bioinformatics**

☐ **A computational biology course, such as:**
- BIOL 4250 Population Genetics
- BIOL 6160 Graduate Bioinformatics
- BIOL 4802 Research in Evolutionary Genomics*
- BIOL 4075 Research in Phylogenetics
- Undergraduate Research in a Computational Biology lab

☐ **Any three computer science courses at the level of CSCI 1101 or above, such as:**
- CSCI 1101 Computer Science 1 (recommended)
- CSCI 1102 Computer Science 2 (recommended)
- CSCI 2227 Introduction to Scientific Computation*
- CSCI 3345 Machine Learning*
- CSCI 3346 Data Mining *
- CSCI 3383 Algorithms *

*Prerequisites apply
TOTAL – 7 courses