Bioinformatics Track

The Bioinformatics track, administered by the Department of Computer Science, looks at computational approaches to biomedical problems. Students may focus in computational data analysis, systems biology, data mining, simulation and modeling, visualization, or other areas that incorporate computer science and mathematics in biological research. This track requires some undergraduate computer science as a prerequisite (COMP 15 or the equivalent). Students will work with an advisor to design a coherent program including computer science electives as well as courses in computational biology, math and biotechnology.

Track Requirements

In addition to the 12 core SHU requirements, students in this track must also take:

Course ID	Course Name
CS 135 (3 SHUs)	Machine Learning
CS 160 (4 SHUs)	Algorithms
CS 166 (3 SHUs)	Computational Systems Biology
CS 167 (3 SHUs)	Introduction to Computational Biology
Bioinformatics Elective 1	Elective
Bioinformatics Elective 2	Elective

Elective Credits in Bioinformatics

As always, please consult the SIS Student Portal website for exact times and dates of all classes offered below. Other relevant COMP electives will be found among the special topics classes offered each term. Recent such offerings include Computational Systems Biology, Advanced Algorithms, Data Structures

and Algorithms, Natural Language Processing, Reinforcement Learning, and Information Theory.

Course ID	Course Name
CS 111 (3 SHUs)	Operating Systems
CS 112 (3 SHUs)	Networks
CS 115 (3 SHUs)	Database Systems
CS 116 (3 SHUs)	Computer Security
CS 131 (3 SHUs)	Artificial Intelligence
CS 136 (3 SHUs)	Statistical Pattern Recognition
CS 163 (3 SHUs)	Computational Geometry
CS 170 (3 SHUs)	Computation Theory
CS 175 (3 SHUs)	Computer Graphics
CS 177 (3 SHUs)	Visualization
COMP 293/294 (0-6 SHUs)	Master's Project
COMP 295/296 (0-6 SHUs)	Master's Thesis
BIO 102 (3 SHUs)	Human Genetics

Course ID	Course Name
BIO 103 (3 SHUs)	Developmental Biology
BIO 105 (4 SHUs)	Molecular Biology
Other relevant CS special topics courses with advisor approval	