



BACHELOR OF SCIENCE IN

Computational Biology

Undergraduate Degree Requirements | www.sci.pitt.edu

The Bachelor of Science in Computational Biology, offered jointly between the Departments of Biological Sciences (Dietrich School of Arts & Sciences) and Computer Science (School of Computing and Information), will prepare students to understand core principles, models, and theories in the fields of biology and computer science and use them strategically to solve key problems in Computational Biology. Graduates will have the skills and knowledge to pursue graduate study or careers in industry.

Total credits for major: **64**

REQUIRED COURSES

BIOLOGICAL SCIENCES – 12 credits

BIO SC 0150 Foundations of Biology 1
BIO SC 0160 Foundations of Biology 2
BIO SC 0350 Genetics

BIO SC 1000 Biochemistry

OR BIOSCI 1810 Macromolecular Structure and Function **AND**
BIO SC 1820 Metabolic Pathways and Regulation

COMPUTER SCIENCE – 16 Credits

CS 0011 Programming for Scientists (Python)
CS 0401 Intermediate Programming Using Java
CS 0445 Data Structures
CS 1501 Algorithm Implementation
CS 1656 Introduction to Data Science

COREQUISITE COURSES - CHEMISTRY – 11 credits

CHEM 0110 General Chemistry 1
CHEM 0120 General Chemistry 2
CHEM 0310 Organic Chemistry 1

COREQUISITE COURSES – MATH AND STATS – 11 credits

MATH 0220 Analytical Geometry and Calculus 1
STAT 1000 Applied Statistics
CS 0441 Discrete Structures for CS

COMPUTATIONAL BIOLOGY – 11 credits

BIO SC 1540 Computational Biology

BIO SC 1542 Bioinformatics

OR BIO SC 1544 Simulation and Modeling

BIO SC 1640 Computational Biology Research

OR CS 1640 Computational Biology Software Design

BIO SC 1770 Computational Biology Seminar

ELECTIVES – 3 credits

GRADE REQUIREMENTS

All courses offered from the Departments of Biological Sciences and Computer Science must be completed with a grade of C or better. Corequisite courses offered from the Departments of Mathematics, Statistics, and Chemistry must be completed with an average overall grade of C or better with the stipulation that CHEM 0110 and 0120 must be completed with a grade of C or better.

CONTACT

Contact sciadmit@pitt.edu with any questions regarding the Computational Biology major or admissions to the School of Computing and Information.