DEGREES & CERTIFICATES

COMPUTATIONAL BIOLOGY CERTIFICATE OF ACHIEVEMENT (CA)

About the Program
Computational Biology uses data analysis, mathematical modeling, and computational simulation techniques to understand complex biological systems. The Computational Biology certificate provides coursework designed to train students entering careers that require the interpretation and analysis of large amounts of biological data. The objective of the certificate is to acquire skills in computer science, biology and statistics that can be applied to bioinformatics. Students may also wish to obtain the Associate of Arts in Computational Biology degree, which can be used to transfer to a university for a BA/BS degree in Computational Biology, Biotechnology, Bioinformatics, or related field.

Program Goals and Objectives
The Computational Biology Certificate of Achievement is designed to train students entering, or continuing, in careers that require the interpretation and analysis of large amounts of biological data. The objective is to acquire skills in computer science, biology and statistics that can be applied to bioinformatics.

Career Opportunities
Career opportunities for students with a Certificate of Achievement in Computational Biology may include employment with pharmaceutical companies, biotechnology companies, academic research and scientific software companies.

Program Outcomes

- Upon completion of the AA in Computational Biology, students are able to demonstrate an understanding of the fundamental concepts in molecular biology, including DNA, genes, proteins and genomes.
- Upon completion of the AA in Computational Biology, students are able to explain the use of computational techniques to solve biological problems.
- Upon completion of the AA in Computational Biology, students are able to use online resources such as NCBI (National Center for Biotechnology Information) and bioinformatics applications to research and analyze biological data.

Learning and Career Pathway Maps

View LPC Program Map

REQUIRED CORE: (21 units)
BIO 1C Cell and Molecular Biology..... 5
BIO 2A Bioinformatics..... 4
CHEM 1A General College Chemistry I..... 5
CS 7 Introduction to Computer Programming Concepts..... 3
MATH 40 Statistics and Probability..... 4

LIST A: Select one (5 units)
BIO 1A General Botany..... 5
BIO 1B General Zoology..... 5