

COMPUTATIONAL MOLECULAR BIOLOGY OPTION

This option is offered within the following major(s):

- Biochemistry and Molecular Biology - College of Science (<http://catalog.oregonstate.edu/college-departments/science/school-life-sciences/biochemistry-biophysics/biochemistry-molecular-biology-bs-hbs/>)

The Computational Molecular Biology option is designed for students interested in the interface of molecular biology, computer science, and statistics. It provides strong preparation for graduate school in computational biology as well as the biotechnology and pharmaceutical industry workforce. This option couples the comprehensive core training in biochemistry and molecular biology with advanced course work in mathematics, statistics, computer science, and bioinformatics. Students are strongly encouraged to participate in undergraduate research, and up to six research credits can be applied to the Upper-division Science Elective requirements. Faculty advisors work with students to identify elective courses, undergraduate research opportunities, and professional internships that support their individual interests.

Option Code: 973

Code	Title	Credits
Core		
BB 485	APPLIED BIOINFORMATICS	3
CS 161	INTRODUCTION TO COMPUTER SCIENCE I	4
Electives		
Select 14 or more credits of the following:		14
BB 401	UNDERGRADUATE RESEARCH	
BI 311	GENETICS	
BOT 460	FUNCTIONAL GENOMICS	
BOT 475	COMPARATIVE GENOMICS	
BOT 476	INTRODUCTION TO COMPUTING IN THE LIFE SCIENCES	
CS 162	INTRODUCTION TO COMPUTER SCIENCE II	
CS 261	DATA STRUCTURES	
CS 325	ANALYSIS OF ALGORITHMS	
CS 420	GRAPH THEORY WITH APPLICATIONS TO COMPUTER SCIENCE	
CS 446	NETWORKS IN COMPUTATIONAL BIOLOGY	
MB 420	MICROBIAL GENOMES, BIOGEOCHEMISTRY, AND DIVERSITY	
MTH 231	ELEMENTS OF DISCRETE MATHEMATICS	
ST 352	INTRODUCTION TO STATISTICAL METHODS	
or ST 411	METHODS OF DATA ANALYSIS	
or ST 412	METHODS OF DATA ANALYSIS	
Total Credits		21

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