

PROGRAM IN BIOINFORMATICS AND COMPUTATIONAL BIOLOGY

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Technological advances in the last two decades have created an avalanche of biological data, and this challenge will only grow in the immediate future. Modern tools and knowledge to analyze and interpret large, complex datasets are thus increasingly central to much of biology. They are required to improve human health and natural and agricultural resource management as well as to understand the natural world better. Moreover, industries and agencies in the areas of health, agriculture, and conservation require workers who master these new tools and knowledge. It has become increasingly clear that success in science requires an integrative approach that unites experimental design, data collection, analysis and interpretation in a common framework. To meet this need, the University of Idaho launched the interdisciplinary Bioinformatics and Computational Biology (BCB) graduate program in 2003. This program includes faculty with expertise in the biological sciences, mathematics, statistics, and computer science.

The University of Idaho offers M.S. and Ph.D. degrees in Bioinformatics and Computational Biology (BCB) as well as a graduate certificate in BCB. The BCB program is offered on campus in Moscow at the University of Idaho and is administered by the College of Science.

A degree in BCB requires coursework and practical experience in biology, mathematics, statistics, and computer science. The focus of the degree is on learning to develop and use computational and mathematical tools to analyze biological data. BCB is a highly interdisciplinary program and requires students and faculty to bridge these disciplines. BCB faculty members are drawn from twelve departments from the colleges of Agricultural and Life Sciences (<https://catalog.uidaho.edu/colleges-related-units/agricultural-life-sciences/>); Engineering (<https://catalog.uidaho.edu/colleges-related-units/engineering/>); Letters, Arts and Social Sciences (<https://catalog.uidaho.edu/colleges-related-units/letters-arts-social-sciences/>); Natural Resources (<https://catalog.uidaho.edu/colleges-related-units/natural-resources/>); and Science (<https://catalog.uidaho.edu/colleges-related-units/science/>). These faculty members are available to serve on BCB graduate student committees.

The M.S. and Ph.D. degrees prepare students for a lifetime of discovery. They enable the graduate to advance the state of the art, not merely keep up with it. The graduate program develops the student's critical thinking, investigatory, and expository skills. They will acquire the methodological skills to resolve important open problems and tackle challenging new projects. The student will learn to present problems and solutions, both verbally and in writing.

Bioinformatics and Computational Biology Graduate Program

- Bioinformatics and Computational Biology Graduate Academic Certificate (<https://catalog.uidaho.edu/colleges-related-units/science/bioinformatics-computational-biology/bioinformatics-computational-biology-graduate-academic-certificate/>)

- Bioinformatics and Computational Biology (M.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/bioinformatics-computational-biology/bioinformatics-computational-biology-ms/>)
- Bioinformatics and Computational Biology (Ph.D.) (<https://catalog.uidaho.edu/colleges-related-units/science/bioinformatics-computational-biology/bioinformatics-computational-biology-phd/>)
- Professional Applications of Data Science Graduate Academic Certificate (<https://catalog.uidaho.edu/colleges-related-units/science/bioinformatics-computational-biology/professional-applications-of-data-science-graduate-certificate/>)