

Bioinformatics: MBinf, MSc, PhD

Do you want to become part of a revolution in biology? Technological advances have led to an explosion in the amount of biological information available to scientific communities, governments, and industry. The challenge now is how to organize, visualize, and interpret this vast amount of data. Bioinformatics seeks to make sense of biological processes on all scales, from the molecular level to full ecosystems, using powerful and efficient computational techniques. Graduate students in our bioinformatics programs apply skills in programming, statistics, and data management in their own research project. Areas of focus have included agricultural science, ecology, evolution, genetics, medicine, and veterinary science.

uoguelph.ca/bioinformatics

Program

We offer two Master's options and a Doctoral program. The course work plus major research project Master of Bioinformatics (MBinf) is a three-semester program primarily tailored for students with a background in life sciences. The traditional thesis-based MSc in Bioinformatics (MSc) is a six-semester program for students who already have a strong background in computational science and/or statistics and wish to conduct substantial research leading to a thesis. Thesis-based MSc students may choose to participate in the Collaborative Specialization in Artificial Intelligence. The PhD program (twelve semesters) requires that students successfully complete a project proposal and a qualifying exam and defend a research-based thesis.

Faculty and Laboratories

Our interdisciplinary programs aim to provide students with broad research and experiential opportunities to help meet their career goals. Over 50 researchers in funded laboratories in departments across campus are actively engaged in the bioinformatics graduate programs, thus providing students with opportunities to conduct cutting-edge and impactful research in a wide range of fields. All students have graduate advisory committees comprised of faculty in both life sciences and computational sciences in order to ensure that students have



integrative and multidisciplinary research experiences.

Admission Requirements

Applicants should review the admission requirements to see if they qualify here: uoguelph.ca/bioinformatics/admission-and-fees/requirements

MBinf, MSc:

- Honours BSc with a minimum B (75%) standing in the last two years of full-time equivalent study

PhD:

- MSc/MBinf with a minimum A- (80%) standing

Application Deadlines

MSc and PhD: Ongoing

Interested candidates are encouraged to apply at least four months prior to the intended start date (6-8 months prior for international applicants).

MBinf: February 28 (Applications will be reviewed starting January 1)

Space permitting, exceptional domestic candidates, with a GPA of A or higher, will be considered through June 15.

ARE YOU INTERESTED IN:

- Integrating research that blends life sciences and computational statistics
- Developing the computational and programming skills necessary to manage and analyze big data
- Acquiring a background in bioinformatics

CAREER OPPORTUNITIES:

- Bioinformatics
- Computer Sciences/Programming
- Healthcare/Life Sciences
- Software Development

CONTACT INFORMATION

Director:

Dr. Jennifer Geddes-McAlister
jgeddesm@uoguelph.ca

Graduate Program Coordinator:

Dr. Steffen Graether
graether@uoguelph.ca

Bioinformatics Program Manager:

Dr. Emily Berzitis
bioinformatics@uoguelph.ca