

## Faculty Offering Programs in...

**Astronomy and Physics:** Astronomy and astrophysics examine the universe, galaxies and stars; stellar birth, evolution and death; how explosions of stars create fast-moving cosmic ray particles and pulsars; how the rotation of galaxies reveals the presence of dark matter; and cosmology and the evolution of the universe. **Physics** explores the universe from the grandest to most minute; from the structure of the cosmos to the structure of sub-atomic particles, and all the forces that hold them together and apart.

**Biological Sciences:** Biology is the study of life as it has evolved and is evolving on earth. All aspects of life are examined, from molecular processes inside cells, to large scale ecological interactions between organisms in their environment, and how the changing environment shapes these interactions.

**Chemistry:** Chemistry is the science concerned with the properties of atoms and molecules, of which all matter is composed. Chemists use their knowledge of the processes of matter to either create new substances or examine existing ones. The Department of Chemistry is one of the largest research-focused departments in the University of Manitoba with world-class facilities and course options.

**Biochemistry:** Biochemistry is the discipline that attempts to understand ourselves and our interactions with nature from the direction of the physical sciences. It is the study of the chemistry of life.

**Microbiology:** Microbiology is the study of microscopic organisms: bacteria, viruses, fungi, protozoa and algae. Programs provide a comprehensive study of modern microbiology ranging from environmental to medical to molecular microbiology.

**Genetics:** Branch of biology concerned with the study of genes, genetic variation, and heredity in organisms. Genetics forms one of the central pillars of biology and overlaps with many other areas, such as agriculture, medicine, and biotechnology.

**Psychology:** A field that explores advances in the biological bases of behaviour and cognitive processes, and behavioural and cognitive neuroscience. Includes neuroscience, comparative psychology, cognitive science, applied behavioural analysis, development psychology, clinical psychology, school psychology and social and personality psychology.

**Computer Science:** A degree in Computer Science will help you contribute to the incredible ways computers are shaping our lives. You can specialize in Artificial Intelligence, Computer Systems, Databases, Human-Computer Interaction and Graphics, Networks and Security, Software Engineering, Theoretical Computer Science or Web-Based Systems.

**Data Science:** A field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from structured and unstructured data, and apply knowledge and actionable insights from data across a broad range of application domains.

**Mathematics:** Mathematics is the study of quantity, structure, space, and change. Mathematics is the basis of all sciences and provides a solid foundation for many fields in science, engineering and technology. It involves developing the tools needed to study everything around us and to make predictions about the environment and the economy.

**Actuarial Mathematics:** Actuarial Studies is a broadly-based commerce discipline that involves the study of mathematics, statistics, accounting, economics, and finance, and their application to long-term financial management. It includes the study of models used in insurance and superannuation to quantify and manage risks such as survival, sickness, retirement, accident, fire, flood, and fluctuations in asset values.

**Statistics:** Statistics is an analytical discipline that helps other disciplines carry out research projects and studies that involve measurement, comparison, and interpretation. The department offers joint programs with Computer Science, Mathematics, Economics and Actuarial Mathematics.

**CO-OP options are offered for all programs.**

### For Applications Contact:

Faculty of Science  
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University of Manitoba, Winnipeg, MB R3T 2N2  
PHONE: 204-474-8256 FAX: 204-474-7618  
**Web Site:** [Wawatay Program](#)  
**Email:** [wawatay@umanitoba.ca](mailto:wawatay@umanitoba.ca)

**Application Deadline May 10<sup>th</sup>**

## Wawatay Program

**Providing a community of support for  
students of Indigenous ancestry**

**Wawatay:** A research-based program that is shaped by a combination of student interests, Indigenous community needs and relevant research in the Faculty of Science. Students who complete a Bachelor of Science degree as a Wawatay Scholar will have a strong connection to their Indigenous community, access to a network of support and future contacts, and professional skills and knowledge of how to apply that degree to a given career.

To qualify for the Wawatay program students must meet University 1 entry requirements for Academic Year 2021.

In the next few years, the program will be able to offer an opportunity for Indigenous students, who may not meet standard entrance requirements for science.

## Why become a Wawatay Scholar?

By maintaining connection to community and culture throughout the science degree program, Wawatay Scholars grow into Scientists who can walk in both worlds, with unique capabilities to forge a new future for themselves and their communities.

### Summer Term (Orientation)

The summer term begins July 12 to August 20, 2021.

Benefits of the summer term are the following:

- Introduce students to Researchers and Labs.
- Provide professional skill building workshops and training through BEAHR.
- Build cohort spirit through development and execution of team project.
- Engage with Faculty, Researchers, Indigenous Scholars, Elders, Knowledge Keepers and Faculty of Science students.

### Research Engagement

- Wawatay Scholars provided special topics science courses that will develop scientific research skills.
- Students will engage with Faculty of Science researchers and community to develop and carry out a research project of specific interest to the community/student and faculty throughout degree.

### Academic Support

- Individual academic advising.
- Focused tutoring.
- Wawatay Mentorship Program.

### Personal Support

- Assistance with university adjustments.
- Exam stress management.
- Study skills.
- Student group to build community within the program.

### Financial Support

- Able to provide limited support through a scholarship and bursary program funded by our sponsors.
- Assist students in completing applications to obtain funding through their First Nation Educational Authority or Métis funding programs.
- Assist students in completing applications to obtain scholarships and bursaries.

### Career Support

- Help students develop resume and cover letter writing skills.
- Conduct mock interview sessions to help develop interview skills.
- Provide summer and permanent job search assistance.

### Program Goal

- Build relationships with Elders and Knowledge Holders so that we can integrate Indigenous perspectives and approaches into a Faculty of Science degree for the benefit of all. The inclusion and respect of Indigenous knowledge help students and faculty appreciate learning, doing, and teaching.