



# THE UNIVERSITY OF WINNIPEG

For more information visit [www.uwinnipeg.ca](http://www.uwinnipeg.ca) or contact a student recruitment officer at [welcome@uwinnipeg.ca](mailto:welcome@uwinnipeg.ca) or 204.786.9844. In any case where The University of Winnipeg Course Calendar and this fact sheet differ, the current Calendar takes precedence.

## Master of Science in Bioscience, Technology and Public Policy

This graduate program is designed to provide an excellent basis for a Ph.D. in Biology and related fields. In addition, our graduates are well-qualified for employment in industry, the public-sector, and academia. Applications for admission into the BioScience, Technology and Public Policy program are reviewed by the Department of Biology Graduate Studies Committee.

### AREAS OF RESEARCH

Members of the Department of Biology has faculty working in the areas of cellular biology, ecology, evolution, forestry, genetics and genomics, microbiology, physiology and environmental sciences. Information about specific faculty research interests can be found on the department website at: <http://biology.uwinnipeg.ca/>. Students may also be supervised by faculty in other Science departments at the University of Winnipeg or professors holding adjunct status in the Department of Biology at the University of Winnipeg.

### DEPARTMENT ADMISSION REQUIREMENTS

Four year undergraduate degree in science, life sciences or a related field. Minimum Entry requirement: Overall GPA of 3.0 (out of 4.5) or equivalent with no grade less than C+ in the last two years of full time study. English requirement for those for whom English is an additional language: You must show that you are ready to study here by meeting one of the requirements listed in the University of Winnipeg International Office webpage <http://www.uwinnipeg.ca/index/international-engprofrqmts>

### PROGRAM REQUIREMENTS

For more information, visit us at <http://www.uwinnipeg.ca/index/grad-studies-index>

The Master of Science in Bioscience, Technology and Public Policy program is a thesis based program. Students will be expected to complete course work that will include three elements: core bioscience courses; courses in BioScience & Technology and courses that place science in the broader context of society. In addition, students are expected to undertake a major research project culminating in a Master of Science thesis.

### SAMPLE COURSE DESCRIPTIONS

**GBIOL-7402(3) Current Topics in Ecology (Le3)** This course addresses current topics in ecology, including a range of potential topics from which students can select those of interest. Students may also offer their own topics for presentation. Students will present seminars to the class on chosen topics, and their evaluation will be based upon class participation, and will involve peer assessment.

**GBIOL-7304(3) Current Topics in Genetics & Genomics (Le3)** The field of Genetics has experienced fast changes during the last years. Advances in molecular techniques and computer sciences make it feasible to address old questions and raise new ones. A consequence of this advancement is the birth of Genomics and the evolution of the field into structural, functional and comparative genomics. This course is a combination of readings, oral presentations and discussions that examine current topics in the field of genetics and genomics. A major aspect of the course will be student participation through presentations and discussion of the current literature.

**GBIOL-7101(2) Seminars in Biology (Le3)** This course consists of thesis literature review and proposal seminars and thesis research seminars presented by students in their research areas. Attendance by students is mandatory

during the four terms of their studies. Students in their first year are expected to present at least, but not exclusively, the appropriate background to their topic of research, the rationale and objectives for their study and some aspects of the methodology. Students in their second year are expected to add to their presentation results and conclusion, and provide an idea of future research directions.

## **MINIMUM COURSE AND GRADUATE REQUIREMENTS**

A minimum of 12 credit hours of course work is mandatory. Students are required to obtain a minimum average GPA of 3.0 and no grade less than B in all required coursework. In addition, students are expected to undertake a major research project culminating in a Master of Science thesis. As a condition of admission, each MSc student must have a Supervisor who is a member of the Faculty of Graduate Studies. The Supervisor's responsibility is to advise the student on a program of study, direct research, and supervise thesis work.

**Expected Time to Graduate:** 2 to 3 years.

**Maximum Time to Graduate:** 5 years

## **REQUIRED COURSES**

### **Bioscience Courses**

#### **Required:**

- GBIOL 7101 Seminars in Biology (3 credits, continuing throughout registration period)
- GBIOL 7111 Thesis course (continuing throughout registration period)

#### **Electives:**

Minimum 3 credits from Core Bioscience Curriculum

- GBIOL 7402 Current Topics in Ecology (3 credits)
- GBIOL 7304 Current Topics in Genetics & Genomics (3 credits)
- GBIOL 7100 Directed Studies in Life Sciences (3 credits)

Minimum 3 credits from Bioscience & Technology Curriculum

- GBIOL 7201 Molecular Biotechnology I (3 credits)
- GBIOL 7102 Directed Studies in Biosciences and Technology (3 credits)
- GBIOL 7104 Scientific Methods (3 credits)

Minimum 3 credits from Bioscience & Policy Curriculum

- GBIOL 7103 Science and Policy (3 credits)
- MULTI 7119 Infectious Diseases Policy (3 credits)
- ES/GBIOL 4614/7614 Critical Environmental Issues (3 credits)

**NOTE:** Supervisors may assign more than the minimum 12 credit hours for a student's degree program. With exception of Seminars in Biology, and at the discretion of the Biology Graduate Studies Committee, students are allowed to substitute up to 3 credit hours with a course/s taken from different Institution.

## **ADMISSION REQUIREMENT**

The applicant must have a 4-year Bachelor of Science or equivalent with a minimum overall GPA of 3.0 and no grade less than C+ in the last two years of full time university study. Admission will also depend upon the availability of a faculty member to supervise the student, and resources to support the student's research.

## **APPLICATION DEADLINES**

Application packages will be on hold until ALL required documents are received. Applications are considered upon arrival of a complete package and acceptance is on a rolling basis. The preferred start date is September 1 with deadline for submissions being February 1. Applications received after the official deadline will be considered, but cannot be guaranteed space in the program although it may be possible to start earlier to obtain research experience.

## **HOW TO APPLY**

1. Complete the on-line application form available at <http://www.uwinnipeg.ca/index/grad-studies-programs>
2. Provide two official/notarized transcripts of academic work completed to date, sent directly from the issuing institution. If the final transcript does not show that a completed degree has been conferred, an official/notarized copy of your diploma is also required.

3. Supply two letters of recommendation from individuals most familiar with your academic work and relevant experience.

4. English requirement for foreign students: If English is not your first language; you must show that you are ready to study here by meeting one of the requirements listed in the University of Winnipeg International Office webpage <http://www.uwinnipeg.ca/index/international-engprofqrmts>.

5. Submit completed application forms to:

Graduate Studies Admissions Office  
The University of Winnipeg  
515 Portage Avenue  
Winnipeg, Manitoba  
Canada R3B 2E9

#### **CONTACT US**

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