

# MICROBIOLOGY, PH.D.

Microbiology

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Academic Staff: Please refer to the Microbiology website (<https://sci.umanitoba.ca/micro/faculty-and-staff/>) for academic staff information.

## Microbiology Program Information

The department offers Master of Science and Doctor of Philosophy programs of study.

## Admission Information

### Admission to the Faculty of Graduate Studies

Application and Admission Procedures are found in the Academic Guide (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/application-admission-registration-policies/>).

Admission requirements for doctoral students are found in the Doctor of Philosophy General Regulations (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/doctor-philosophy-general-regulations/>) section of the Guide.

### Microbiology Ph.D. Admission Requirements

Admission requirements are those of the Faculty of Graduate Studies.

## Application Information

Students should complete and submit their online application with supporting documentation by the date indicated on the Microbiology Ph.D. program of study ([https://umanitoba.ca/faculties/graduate\\_studies/admissions/programs/microbiology.html](https://umanitoba.ca/faculties/graduate_studies/admissions/programs/microbiology.html)) page.

## Degree Requirements

A minimum of 6 credit hours of 7000 level course work is required beyond the M.Sc. degree, and must include one of MBIO 7010, MBIO 7020 or MBIO 7030 (Seminars in Microbiology I, II or III).

A minimum of 12 credit hours of 7000 level course work is required beyond the Honours Bachelor's degree when the M.Sc. degree is not required and 9 of these 12 credit hours should normally be from Microbiology courses (include one of MBIO 7010, MBIO 7020 or MBIO 7030). These are minimal requirements; students may be directed to take additional courses by their Advisor or Advisory Committee.

Students in the Ph.D. program are required to present one 50-minute seminar on their own research as part of the regular Department Seminar program.

Expected Time to Graduate: 4 - 6 years

### Progression Chart

Course	Title	Hours
<b>Year 1</b>		
MBIO 7010	Graduate Seminar in Microbiology 1 <sup>1</sup>	3

MBIO 7040	Graduate Microbiology <sup>1</sup>	3
GRAD 7300	Research Integrity Tutorial	0
GRAD 7500	Academic Integrity Tutorial	0
<b>Hours</b>		<b>6</b>

### Year 2

MBIO 7020	Graduate Seminar in Microbiology 2 <sup>1</sup>	3
Select one of the following:		3
MBIO 7060	Microbial Interactions	
MBIO 7070	Bioprocessing	
MBIO 7100	Advanced Concepts in Molecular Biology	
MBIO 7160	Special Problems in Microbiology	
MBIO 7200	Macromolecular Structure Analysis	
Or other approved by advisory committee		
<b>Hours</b>		<b>6</b>

### Years 3-5

GRAD 8020	Doctoral Re-registration	0
GRAD 8000	Doctoral Thesis (register if defending that term)	0
<b>Hours</b>		<b>0</b>
<b>Total Hours</b>		<b>12</b>

<sup>1</sup> Students who have transferred from the M.Sc. program and have successfully completed MBIO 7010 and MBIO 7040 may wish to take MBIO 7020 and/or the additional graduate course in Year 1.

## Registration Information

Students should familiarize themselves with the Faculty of Graduate Studies 'GRAD' courses applicable to their program (<https://catalog.umanitoba.ca/graduate-studies/registration-information/>). If you have questions about which GRAD course(s) to register in, please consult your home department/unit.

All new and returning graduate students in the Department of Microbiology must have their programs approved by their advisor and the department head prior to registration.

## Regulations

Students must meet the requirements as outlined in both Supplementary Regulation and BFAR documents as approved by Senate.

### Supplementary Regulations

Individual units may require specific requirements above and beyond those of the Faculty of Graduate Studies, and students should consult unit supplementary regulations (<https://umanitoba.ca/graduate-studies/supplementary-regulations/>) for these specific regulations.

### Bona Fide Academic Requirements (BFAR)

Bona Fide Academic Requirements (BFAR) (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#BFAR>) represent the core academic requirements a graduate student must acquire in order to gain, and demonstrate acquisition of, essential knowledge and skills.

All students must successfully complete:

- GRAD 7300 prior to applying to any ethics boards which are appropriate to the student's research or within the student's first year, whichever comes first; and
- GRAD 7500 within the first term of registration;

unless these courses have been completed previously, as per Mandatory Academic Integrity Course (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#GRAD7500>) and Mandatory Research Integrity Online Course (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#GRAD7300>).

Students must also meet additional BFAR that may be specified for their program.

## General Regulations

All students must:

- maintain a minimum degree grade point average of 3.0 with no grade below C+,
- meet the minimum and not exceed the maximum course requirements, and
- meet the minimum and not exceed the maximum time requirements (in terms of time in program and lapse or expiration of credit of courses).