

# SOIL SCIENCE, PH.D.

Soil Science

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**Academic Staff:** Please refer to the Soil Science staff listing (<https://umanitoba.ca/agricultural-food-sciences/soil-science/soil-science-faculty-and-staff/>).

## Soil Science Program Information

The Department of Soil Science offers graduate programs leading to the Master of Science and the Doctor of Philosophy degrees.

## 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.

### Soil Science 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 Soil Science Ph.D. (<https://umanitoba.ca/explore/programs-of-study/soil-science-phd/>) program of study page.

## Degree Requirements

Each student's program is individually tailored, but still must satisfy those requirements prescribed by the Department. Where admission to the Ph.D. is from a M.Sc. degree, the course work will be a minimum of 6 credit hours at the 7000 level or higher of which at least 3 credit hours must be from the Department of Soil Science.

Where admission to the Ph.D. is directly from an Honours Bachelor Degree or equivalent, the coursework will be a minimum of 18 credit hours consisting of a minimum of 12 credit hours at the 7000 level (of which at least 6 credit hours must be from the Department of Soil Science) with the balance of the coursework at the 3000 level or above.

To meet graduation requirements, all students must have demonstrated either in their current program or in previous studies:

1. Twelve credit hours in fundamental and applied soil sciences at the senior undergraduate or graduate level;  
**and**
2. Experimental design and statistical analysis - 3 credit hours at the senior undergraduate or graduate level;

and

3. Communication skills – students will have completed SOIL 7220 or a similar course approved by the Department Head. In addition, students will normally present papers at scientific meetings.

**Expected Time to Graduate:** 3.5 - 4 years

## Progression Chart

Course	Title	Hours
<b>Year 1</b>		
GRAD 7300	Research Integrity Tutorial	0
GRAD 7500	Academic Integrity Tutorial	0
SOIL 7220	Principles of Scientific Research and Communication	3
Select courses as determined by advisory committee and student <sup>1</sup>		
GRAD 8000	Doctoral Thesis <sup>2</sup>	0
<b>Hours</b>		<b>3</b>
<b>Year 2</b>		
Select courses as determined by advisory committee and student <sup>1</sup>		
GRAD 8010	Doctoral Candidacy Examination (to be completed in Year 2 or Year 3)	0
GRAD 8000	Doctoral Thesis <sup>2</sup>	0
<b>Hours</b>		<b>0</b>
<b>Year 3</b>		
Select courses as determined by advisory committee and student <sup>1</sup>		
GRAD 8010	Doctoral Candidacy Examination	0
GRAD 8000	Doctoral Thesis (to be completed in Year 2 or Year 3) <sup>2</sup>	0
<b>Hours</b>		<b>0</b>
<b>Total Hours</b>		<b>3</b>

<sup>1</sup> Credit hours as determined by advisory committee and student.  
**Minimum credit hours required: 6.**

<sup>2</sup> An essential feature of Ph.D. study is the candidate's demonstration of competence to complete a research project and present the findings. The thesis must constitute a distinct contribution to knowledge in the major field of study, and the research must be of sufficient merit to be, in the judgement of the examiners, acceptable for publication.

## 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 students in the graduate program must meet with their advisor/ advisory committee to determine courses. Courses must be listed on the departmental approval form and written approval granted from both the advisor and the department head or designate. Registration revisions are to be dealt with and approved in like manner.

## 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 requirements (<https://umanitoba.ca/graduate-studies/student-experience/core-academic-requirements/#additional-requirements-by-program>) 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).