



UNIVERSITY  
OF MANITOBA

Department of  
Biological Sciences  
Graduate Student  
Handbook

## **Welcome to the Department of Biological Sciences at the University of Manitoba!!**

The Department was formed with the merging of the former Botany and Zoology departments on July 1<sup>st</sup> 2007. Biological Sciences is a department packed with a diverse research program run by internationally recognized researchers. The diversity of our program is evident as you walk the halls of the Biological Sciences Department - researchers are studying aspects of biology that range from genetics, molecular and developmental biology to whole organism studies of physiology, to community and ecosystem studies of ecology, behaviour and evolution. As a graduate student of the Department you will play a significant role in shaping these research directions, not only those of your own supervisor but also those of the Department itself. So cherish your time in the department and make the most of the resources available to you. **Enjoy your research, academic work and graduate studies!** – They will all bring rewarding and unforgettable experiences, and help shape your future!

Table of contents:

**1. THE CITY**

- a. Housing/rental
- b. Health and dental care
- c. Insurance
- d. Cars
- e. Social aspects – where to go for bars, restaurants, culture, etc
- f. Winnipeg transit

**2. THE UNIVERSITY**

- a. Faculty of Graduate Studies
- b. Faculty of Science
- c. University centre
- d. GSA
- e. CHET program
- f. Campus map
- g. Parking

**3. THE DEPARTMENT**

- a. People
  - i. Faculty
  - ii. Staff
- b. Courses
- c. Training
  - i. Animal care
  - ii. WHIMS
  - iii. Teaching Assistant (TA)
- d. Scholarships and awards
  - i. Dates & deadlines
- e. BSGSA

**4. YOUR DEGREE**

- a. Expectations
- b. Responsibilities
  - i. Of the student
  - ii. Of the supervisor
  - iii. Of the committee
  - iv. Of the Graduate Studies Committee
- c. Registration
- d. Contact people for support

**5. IMPORTANT DATES/TIMELINES FOR MSC AND PHD STUDENTS**

- a. Committee meetings
- b. Proposal
- c. Progress reports
- d. Completion
- e. Candidacy exam
- f. Calendar

## **1. THE CITY**

### *Housing/rental*

Graduate student housing is available both on campus through the University or off campus through rental agencies. The student's union website at <http://umanitoba.ca/student/housing/> is an excellent resource for searching for rental accommodation in the city. For off-campus housing look for something at the south end of the city for an easier commute. Interested in living closer to restaurants, shops and nightlife? Try the Osborne or Corydon areas.

### *Health & Dental*

Dental benefits come as a package to which you are entitled as a graduate student at the University of Manitoba. They come through the University and are built into your tuition fee. You may opt out of this if you choose, but only if you have alternative coverage. The forms are online and there is an on-campus dental clinic in University Centre. The city also offers many options for private dental care.

Family physicians are in short supply in the city and all Winnipeg health clinics are listed under <http://www.gov.mb.ca/health/clinics/index.html>. However, the University does provide on campus health services with several physicians on staff – appointments are necessary. If you do not find a doctor there are numerous walk-in clinics around the city.

### Insurance

Shop around for all kinds of insurance. There are numerous brokers in the city that are always willing to give you advice and sell their product. A comprehensive list of brokers can be found in the Manitoba Public Insurance website at <http://www.mpi.mb.ca/broker/english/brokertxt.asp>. There is also an insurance broker in the student centre. It's a great idea to have rentor's insurance!

### Cars

Cars can be purchased from a private sale or through a registered dealership. There are concentrations of dealerships in the city and the closest to the University is the Waverley Auto mall at Waverly and Bishop Grandin. Alternatively, there is a larger auto mall at Roblin boulevard and the Perimeter highway in the far west of the city

### Social life

Winnipeg is more than just a Prairie town. It is famed for its vibrant cultural diversity and arts and music scene. The Royal Winnipeg Ballet Company is the longest operating ballet company in North America; their home is the Centennial Concert Hall which is part of the Centennial Centre that also includes the Manitoba Museum and Planetarium <http://www.mbccc.ca/>. Other cultural venues include the Manitoba Theatre

Centre and the Prairie Theatre Exchange. Winnipeg also hosts numerous international cultural events throughout the year with the Festival du Voyageur and Folklorama, two of the more well-known events. For a more contemporary entertainment venue, the MTS Centre, home of the Manitoba Moose hockey team, is Canada's second most sold-out venue for music concerts. The West End Cultural Centre and the Burton Cummings Centre are also venues for many music acts; plus the Folk Festival brings together artists from around the globe every July. For night life, Osborne Village, just south of the Assiniboine River, is a popular location for bars and restaurants. Whatever your favourite cuisine, Winnipeg will have a restaurant that serves it.

#### Winnipeg transit

The bus system around the city is well organized and you can get to most places with a limited number of transfers. Monthly passes and books of tickets can be purchased at most major stores and at *Answers* in the University Centre on campus. For routes and fare information see <http://myride.winnipegtransit.com/en/>

## **2. THE UNIVERSITY**

The University of Manitoba was established in 1877 as Canada's first Western university. There are two campuses, the main Campus in Fort Garry in the south end of the city and Bannatyne campus, located just north of the city centre. The Bannatyne campus is home to the health-related Faculties.

### *Faculty of Graduate Studies (FGS)*

FGS has information on their website [http://umanitoba.ca/faculties/graduate\\_studies/index.html](http://umanitoba.ca/faculties/graduate_studies/index.html) and is the original point of contact for all graduate student applications. The FGS is the principal administrative body that oversees the graduate program run in the Department of Biological Sciences. However, as a graduate student your interaction with the FGS is likely to be limited to your admissions application, your graduation and applications for scholarships, travel awards and bursaries during your time as a graduate student at the University. All other administrative aspects of your degree are run through the Department.

### *Faculty of Science (FS)*

The FS can be found at the following website <http://umanitoba.ca/faculties/science> which is particularly useful when searching for available scholarships and awards. All science departments within the university belong to the FS and can be found through the above website.

### University Centre

This is mainly an undergraduate student body although the Graduate Student Association (GSA) is represented on the the University of Manitoba Students' Union (UMSU) council. UMSU is located in the University Centre in the middle of the Fort Garry campus. Additional facilities or support bodies that are also located in the University Centre include:

The international centre for students:

<http://umanitoba.ca/student/ics/>

Student advocacy:

[http://umanitoba.ca/student/resource/student\\_advocacy/index.html](http://umanitoba.ca/student/resource/student_advocacy/index.html)

Student counseling:

<http://umanitoba.ca/student/counselling/>

### Graduate students association (GSA)

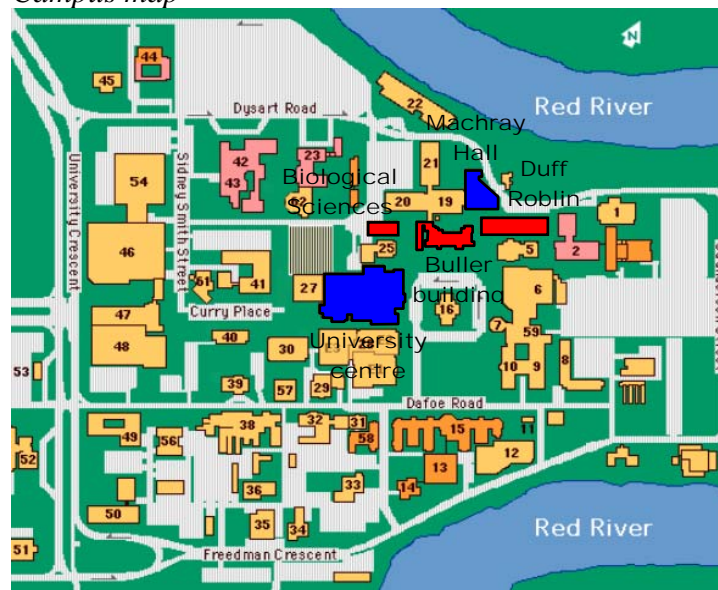
The GSA has an office that is also located in the University centre. This student body provides service exclusively to graduate students and provides a voice for graduate students at the University Level. The GSA has an annual scholarship that it administers, as well as funding for conference attendance. More information regarding the GSA can be found at [www.umgsa.ca/](http://www.umgsa.ca/) or see the GSA Office Manager at 221 University Centre.

Certificate in Higher Education and Teaching Program (CHET program)

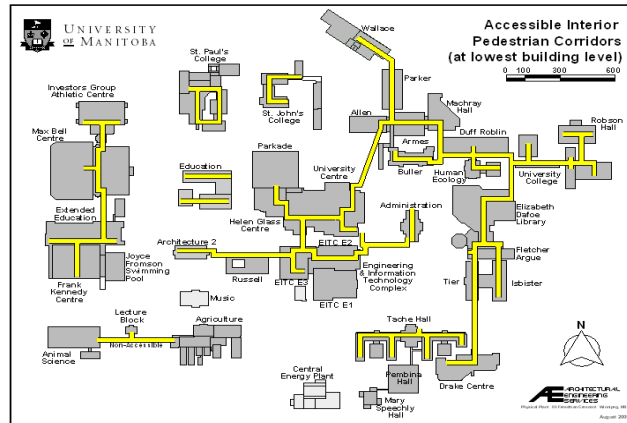
This program was designed by the FGS and the University Teaching Services primarily for PhD students. The program aims to prepare students for the requirements of life as a faculty member in academia. This valuable program is not meant to extend the time to completion of your degree. More details can be found at:

[http://www.umanitoba.ca/academic\\_support/uts/programs/chet.html](http://www.umanitoba.ca/academic_support/uts/programs/chet.html)

*Campus map*



Winter can get pretty cold in Manitoba so there is a network of tunnels that connects most of the buildings on campus – get to know the underground and stay warm!



### Parking

If you choose to drive to campus, you'll need an annual parking permit which is currently \$467.25; and it doesn't include parking during the summer session. There is stiff competition for parking passes – make sure you are ready and waiting at a computer when parking permit purchasing begins. Parking on campus is free in unreserved lots after 4:30 pm. Check out the parking website for more information: <http://umanitoba.ca/campus/parking/student/>

### **3. THE DEPARTMENT**

The Department of Biological Sciences (DBS) is new to the University of Manitoba; created from the Departments of Botany and Zoology merger in July of 2007. The department has its current focus categorized under five theme areas: Cell molecular and Developmental Biology; Biodiversity, Ecology and Environmental Biology; Environmental and Integrative Physiology; Evolution and Biodiversity; and Integrative Biology. The department promotes both field- and lab-based research, along with theoretical and quantitative methods that advance our understanding and integration of biology in both its most narrow and broadest terms. The department itself is committed to advancing the understanding of biological structure and function, and also to developing new tools and technologies that address current and emerging problems facing all living organisms.

#### *People*

The DBS is comprised of over 35 Faculty, support staff, technicians who maintain animal holding and greenhouse facilities, a small number of post-doctoral students and over 70 graduate students. The department also employs a number of sessionals. For a full list of the department's personnel go to:

[http://umanitoba.ca/faculties/science/departments/bio\\_sciences/people/deptmembers.html](http://umanitoba.ca/faculties/science/departments/bio_sciences/people/deptmembers.html)

### *Research faculty*

Research faculty can be grouped by the primary area of their research interests (see above) and are dispersed between the Biological Sciences, Buller and Duff Roblin buildings. You may not think that one aspect of biology is of relevance to your research, however, many of the faculty cross a number of the theme areas. So get to know the faculty, you never know when they might come in useful!

### *Support staff*

The department has two Administrative Assistants (Claire Juan-Odendahl – student travel claims, special lectureships; and Alys Kenyon – keys, human resources, payroll, etc.) and three Office Assistants: Get to know Maureen Foster who is the graduate-student secretary and Doreen Davies (back-up for graduate program), and Urmilla Denouth. Rounding out the list of administrative personnel are John Stoyko and Narinder Kalkat who are involved in placing orders for equipment and supplies both within and external to the University.

### Courses

The Department of Biological Sciences offers a variety of courses to its graduate students. These courses include directed studies courses, courses on techniques (micro and macro) and statistical analysis. For students entering graduate studies in

the Department of Biological Sciences, there is one required course (which differs depending upon whether the student is in a MSc or PhD program). A student entering the MSc program is required to enroll in BIOL7100: Core Skills in Research; a student entering the PhD program is required to enroll in BIOL7220: Critical Thinking in Biological Sciences. A full list of courses with course descriptions can be found at

[http://umanitoba.ca/faculties/science/departments/bio\\_sciences/grad/844.htm](http://umanitoba.ca/faculties/science/departments/bio_sciences/grad/844.htm)

Students in the MSc program are required to complete at least 6 credit hours of course work. Students entering a PhD with a prior MSc degree also have to complete a minimum of 6 credit hours of course work. Students who have entered the PhD program directly from a BSc Honours undergraduate program must complete 12 credit hours of course work. In all of these cases the courses must be at the graduate level and you are not restricted to taking graduate courses only offered by Biological Sciences.

### *Training*

Depending upon the selected area of research graduate students may be required to take training courses. The most common courses are the Animal Care and WHMIS courses.

### *Animal Care*

The syllabus for the animal care training course includes animal-ethics policy as well as the technical modules and information regarding wet-lab training (for those handling animals) can be found at:

[http://umanitoba.ca/research/media/care\\_use\\_syllabus.pdf](http://umanitoba.ca/research/media/care_use_syllabus.pdf) The animal care course is in place to ensure the ethical and humane treatment of animals in research (both laboratory and field-based), and also to ensure the safety of those individuals who conduct the research. All students conducting research on vertebrates are required to complete the Animal Care training course. Register by completing the form found at: [http://umanitoba.ca/research/media/animal\\_user\\_course\\_form.pdf](http://umanitoba.ca/research/media/animal_user_course_form.pdf)

### *WHMIS*

The Environmental Health and Safety Office (EHSO) at the University of Manitoba provides many health, safety and environmental resources ([http://umanitoba.ca/admin/human\\_resources/ehso/](http://umanitoba.ca/admin/human_resources/ehso/)) including WHMIS (Workplace Hazardous Materials Information System) – the goal of this program is to reduce injury and illness from exposure to hazardous materials in the workplace. Graduate students involved in laboratory work should take part in a WHMIS training course and the WHMIS handbook can be found at:

[http://www.umanitoba.ca/admin/human\\_resources/ehso/media/LabSafetyWHMIS.pdf](http://www.umanitoba.ca/admin/human_resources/ehso/media/LabSafetyWHMIS.pdf)

#### *Teaching Assistant training*

Depending on the course for which you are a teaching assistant (TA), the Instructor or Laboratory Demonstrator may require and/or offer a training course. Be sure to check with the person in charge before the start of courses to ensure that you meet all requirements to TA the course.

#### *Scholarships and Awards*

The University, Faculty and Department offer a variety of awards and scholarships. Applications for many of the larger monetary awards are first assessed by the Department before being passed on to the University (University of Manitoba Graduate Scholarships) or NSERC, so **be sure** to check the departmental deadlines for these awards. Dr. Jennifer McLeese chairs the departmental Scholarships and Awards committee, and is the departmental representative on the FS awards committee; she's very helpful especially when it comes to award deadlines and regulations. A full list of scholarships and awards, with their deadlines can be found on the following website:

[http://umanitoba.ca/faculties/science/departments/bio\\_sciences/admin/awards.html](http://umanitoba.ca/faculties/science/departments/bio_sciences/admin/awards.html)

Another source of information on scholarships and awards is the bulletin boards around the main office in the Biology Department. The scholarships posted here are often available through outside funding sources and can often be held with other major awards (examples are the Manitoba Big Game scholarship and the Wildlife Society award).

The Graduate Student Association also offers awards (scholarships, bursaries and travel-conference grants). A list of these awards can be found on the GSA website:

<http://www.umgsa.ca/services.html>

#### *Dates and deadlines*

The deadline for application to these many awards will vary on a year-to-year basis. Be sure to check websites for up-to-date information regarding submission deadlines. Scholarships are often due in the year before they are awarded, so **be sure to check early and ask your supervisor and other students!**

#### BSGSA

The Biological Sciences Graduate Students' Association functions within the Department of Biological Sciences to be your liaison: with the GSA, the faculty (through numerous committees), and the University as a whole (again, through numerous committees). One of the goals of the BSGSA is to foster a sense of community among graduate students and with the

department as a whole. The BSGSA does this by organizing events that range from the purely social (spongee, coffee, etc) to the academic (graduate seminar series and seminars by respected scientists that graduate students invite from outside the University through the Lubinsky, Hanna and Barrett-Hamilton lecture series). More information regarding the BSGSA (executive members, upcoming events, funding for travel to PUBS, etc.) can be found at: [www.umanitoba.ca/~bsgsa](http://www.umanitoba.ca/~bsgsa)

#### **4. YOUR DEGREE**

Mention of regulations in this handbook refer mainly to the newly approved (September 1<sup>st</sup> 2009) Biological Sciences graduate program. For a more complete set of regulations please refer to the graduate studies page on the department's website

##### Registration

To initiate and maintain your status as a graduate student, the registration form (found in the Department of Biological Sciences main office) **must** be completed at the beginning of both the Fall and Winter terms. This is also the form used to register for graduate student courses and it must be signed by your supervisor and the Head of the Department. Completed forms are to be handed in to Maureen Foster, the Graduate Student Secretary (also found in the main office) who will help you finalize your registration.

### *Fees*

Once you are registered, a summary of your tuition and other university fees can be found through Aurora Student. Tuition can be paid in a variety of ways, including online if you are set up for online banking, or in person at the Cashier's Office (room 138, University Centre). More information regarding payment of fees: [http://umanitoba.ca/admin/financial\\_services/rev\\_cap/StudentAccounts.htm](http://umanitoba.ca/admin/financial_services/rev_cap/StudentAccounts.htm)

Note: Registration is not complete until you pay your fees!

### *Expectations*

While completing your graduate degree in the Department of Biological Sciences, there are a number of expectations that have to be met including: course requirements, a proposal and advisory committee meeting requirements. As a PhD student, an important requirement is the candidacy exam. For a full description of the expectations see the Departmental Supplemental Regulations:

[http://umanitoba.ca/faculties/science/departments/bio\\_sciences/regulations.html](http://umanitoba.ca/faculties/science/departments/bio_sciences/regulations.html).

The following provides only a brief summary, it is highly recommended to read these regulations.

### *Advisory committee*

Your advisory committee will be made up of faculty within the department and also outside the

department. Your supervisor will help in choosing the appropriate people that have a scientific background relevant to your chosen area of research. Use all members of your committee to bounce ideas off and discuss your research, they are there to help you in your studies.

#### *Proposal*

It is expected that in the first year of your studies, you will write and present a proposal to your advisory committee.

#### *Progress reports*

The progress report should be at least 2 pages and submitted to the advisory committee approximately 1 week prior to the committee meeting. It should include all of your progress that has occurred in the past year, both scientific and course based.

#### *Committee meetings*

As per the supplemental regulations, it is required that every graduate student meet at least once a year with their advisory committee. These meetings are to discuss your progress, determine future directions for the research, and in general, ensure that you are on your way to a timely completion of your thesis.

### *Candidacy exam*

Full details as to the process of the candidacy exam process for PhD students can be found in the supplemental regulations.

### *Responsibilities*

Those involved in aiding in your completion have responsibilities to you. Moreover, you, as a student, also have responsibilities to ensure you complete a graduate degree.

### *Of the student*

As a student, the one person with the greatest investment in completing your degree is you. It is your responsibility to organize the committee meeting, suggest to your supervisor a candidacy exam timeline (as a PhD student), and to actually write the proposals and progress reports, and your thesis, which only you can do! It's also recommended that you attend all departmental seminars.

### *Of the supervisor*

It is the responsibility of your supervisor to direct you in your program of study and research. This begins with your supervisor's aid in developing your proposal. An additional requirement of your supervisor is to chair advisory committee meetings, provide guidance, help you learn to be an effective researcher, and suggest possible sources of funding. Your supervisor should provide timely feedback to you on your proposal,

progress reports, drafts of your thesis, presentations, and answer your questions. Your supervisor can also help you communicate with the advisory committee, the department, funding agencies, and the FGS.

*Of the committee*

The advisory committee must ensure that you, the graduate student, follow the guidelines set out by the Department of Biological Sciences and the Faculty of Graduate Studies. Your committee must approve your proposed research as well as provide comment and feedback on the progress that you make on a yearly basis.

*Of the Graduate Studies Committee*

The Graduate Studies Committee (GSC) oversees the graduate programs in the Department. Members are elected from the department, and are knowledgeable about the issues related to graduate training and research, and are great sources of information for you and your supervisor, as you progress through your graduate studies.

*Contact people for support*

There are a variety of people within the department that have the ability to help when problems or concerns arise. The Head of the Department, Dr. Judy Anderson and the Chair of the Graduate Studies Committee, Dr. Michele Piercey-Normore, can be approached if you

experience difficulties (e.g., between you and your supervisor and/or advisory committee) that can't be resolved by the involved parties. It's better to ask for help than wait for problems to get bigger! For financial matters and for keys to rooms in Buller and Duff Roblin Buildings, see Alys Kenyon. General departmental inquiries should be directed to Urmilla Deonauth; inquiries on graduate studies should go to Maureen Foster, the graduate student secretary.

### **IMPORTANT DATES/TIMELINES FOR MSc AND PhD STUDENTS**

#### *Proposal*

You are required to develop a thesis-research proposal in your chosen field of study that must be approved by your advisory committee. This should be completed within the first year of study at the University of Manitoba.

#### *Progress Reports*

Deadline for submission of the Annual Progress Report Form is June 15.

#### *Committee meetings*

The advisory committee must meet at least annually, and not later than June 15, as this is the deadline for the abovementioned Progress Report Form. While only one annual meeting is required, you, your committee members or your supervisor, may request multiple meetings to help

ensure your progress and help solve problems that may arise.

*Candidacy Exam (PhD Students only)*

This is the big one and a pass means you are now a PhD candidate proper. The exam must be completed after the thesis proposal and is an eight week process so set aside time for this! More detailed information can be found in the Department's supplemental regulations.

*Completion*

Before your degree is conferred, you must submit a thesis, and defend said thesis orally by responding to questions after a presentation.

*Thesis*

Your thesis must demonstrate your mastery of the field and the soundness of your scientific research. The format of your thesis must be agreeable to you in discussion with your supervisor and your advisory committee, but it cannot consist solely of a compilation of submitted or published papers. A guide for your thesis, which contains formatting regulations as well as regulations and deadlines for submission is at:

[http://umanitoba.ca/faculties/graduate\\_studies/thesis/250.htm](http://umanitoba.ca/faculties/graduate_studies/thesis/250.htm)

### *Defense*

This is a public exam for both MSc and PhD students. Be prepared and try and enjoy it, as it's a landmark day in your education. If you get past this you deserve it and congratulations on getting your graduate degree.

### *Calendar*

The Academic Schedule in the Graduate Calendar should be consulted regularly for information, especially that regarding dates by which your final, revised thesis must be submitted to the FGS for you to be eligible to graduate in a specific session. The Graduate Calendar is located at:

[http://umanitoba.ca/faculties/graduate\\_studies/publications/](http://umanitoba.ca/faculties/graduate_studies/publications/)

Notes