

Syllabus

PLNT 7164: Genetic Mapping in Plants
(Winter Term 2024)

**Faculty of Agricultural and
Food Sciences**



**University
of Manitoba**

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COURSE DETAILS

| | |
|---|--------------------------------------|
| Course Title & Number: | Genetic Mapping in Plants, PLNT 7164 |
| Number of Credit Hours: | 3 |
| Class Times & Days of Week: | 9:00 am – 12:00 pm, Wednesday |
| Location for classes/labs/tutorials: | Lectures: 218 Agriculture Building |
| Pre-Requisites: | PLNT 4330, or consent of instructor |

The Department of Plant Science, in consultation with the Faculty of Agricultural and Food Sciences, has devised a plan so that there is minimal impact on the delivery and content of the course should the instructor fall sick and is unable to continue lectures in-person. Please be assured that the alternative plan outlining any deviation from the normal mode of instruction will be communicated to you as quickly as possible if/when the need arises.

Instructor and Teaching Assistant Contact Information

| | |
|---|--|
| Instructor's Name & Preferred Form of Address: | Dr. Curt McCartney Curt or Dr. McCartney |
| Office Location: | 247A Agriculture Building |
| Office Hours or Availability: | By appointment, 8:30 am – 4:30 pm Monday to Friday |
| Office Phone No. | (204) 474-6062 |
| Email: | curt.mccartney@umanitoba.ca Emails should be professional, but do not have to be formal. I will generally return emails and phone calls within 24 hours. |
| Contact: | Please contact me by email or in-person before/after class. Feel free to contact me if anything is unclear about course content, expectations, etc. |

Course Description

U of M Course Calendar Description

Application of genetic mapping analyses for the dissection of traits in plant species. Linkage mapping, quantitative trait locus (QTL) mapping, association mapping, and related analyses will be reviewed in detail. Emphasis will be placed on practical applications in genetic studies. The analysis and interpretation of real data will be conducted in computer tutorial sessions.

General Course Description

PLNT 7164 Genetic Mapping in Plants provides students with the theoretical basis background for genetic mapping in plants. The theory is then applied to conduct assignments focusing on linkage analysis, QTL mapping in bi-parental mapping population, and association mapping. Finally, students will summarize and present recent genetic research papers.

Course Goals

To understand and implement modern analysis techniques to study the genetic control of traits in plants.

Course Learning Objectives

To acquire knowledge needed to conduct various genetic mapping analyses:

- 1) Linkage mapping
 - a. Determining linkage groups
 - b. Marker ordering methods
 - c. Error detection
- 2) QTL mapping
 - a. Mapping algorithms
 - b. Key statistics, significance thresholds for LOD scores
- 3) Association mapping
 - a. Population structure
 - b. Kinship
 - c. LD decay
- 4) Ability to design experiments with a working knowledge of different genetic analyses and their strengths and weaknesses.

Textbook, Readings, and Course Materials

No textbook.

Supplementary Reading: as assigned.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and university guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the *Copyright Act* applies or written permission has been confirmed. For more information, see the University's Copyright Office website at <http://umanitoba.ca/copyright/> or contact um_copyright@umanitoba.ca.

Course Technology

Course notes and assignments will be posted on UM Learn.

Bring a laptop to class. We will be utilizing software during the lecture periods.

Below are the software packages that will be used in the course:

MapDisto 1.7.7 (http://mapdisto.free.fr/Download_Soft/), linkage analysis, excellent features

QGene (<http://www.qgene.org/qgene/download.php>), QTL mapping, flexible visualization of results

QTL IciMapping (<https://isbreedingen.caas.cn/software/qtlIcimapping/index.htm>), identification of linkage bins (critical step of linkage analysis), linkage analysis (limited features), QTL mapping (includes epistatic QTL analysis), excellent tabulation of data for publication

TASSEL (<http://www.maizegenetics.net/tassel>), Genome Wide Association Study

CIMMYT Software (<https://data.cimmyt.org/dataverse/cimmytswdvn>), useful but not needed

GEA-R (Genotype x Environment Analysis with R for Windows)

META-R (Multi Environment Trial Analysis with R for Windows)

Expectations: I Expect You To

I will treat you with respect and would appreciate the same courtesy in return. See [Respectful Work and Learning Environment Policy](#). I expect you to follow these policies around Class Communication, Academic Integrity, and Recording Class Lectures.

Class Communication:

You are required to obtain and use your University of Manitoba email account for all communication between yourself and the university. All communication must comply with the Electronic

Communication with Student Policy:

http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html.

Academic Integrity:

Each student in this course is expected to abide by the University of Manitoba [Academic Integrity principles](#). Always remember to reference the work of others that you have used. Also be advised that you are required to complete your assignments independently unless otherwise specified. If you are encouraged to work in a team, ensure that your project complies with the academic integrity regulations. You must do your own work during exams. Inappropriate collaborative behavior and violation of other Academic Integrity principles, will lead to the serious [disciplinary action](#). Visit the [Academic Calendar](#), [Student Advocacy](#), and [Academic Integrity](#) web pages for more information and support.

Generative Artificial Intelligence (genAI) Technology:

The use of genAI is not relevant to this course since all course evaluations are done through exams.

Recording Class Lectures:

No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission of Dr. Curt McCartney. Course materials (both paper and digital) are for the participant's private study and research.

Student Accessibility Services:

The University of Manitoba is committed to providing an accessible academic community. [Students Accessibility Services \(SAS\)](#) offers academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.

Student Accessibility Services
520 University Centre
Phone: (204) 474-7423
Email: Student_accessibility@umanitoba.ca

Expectations: You Can Expect Me To

I will be in class for 10 minutes prior to and after the class time to discuss any questions or comments you may have. Assignments will be marked within 14 days of their due date with feedback provided. Presentations will be graded within 7 days with feedback provided.

CLASS SCHEDULE AND COURSE EVALUATION

This schedule is subject to change at the discretion of the instructor and/or based on the learning needs of the students but such changes are subject to [Section 2.8 of ROASS](#).

| Date | Description |
|---------------|---|
| Jan. 10, 2024 | Introduction to course |
| Jan. 17, 2024 | Linkage analysis |
| Jan. 24, 2024 | Linkage analysis |
| Jan. 31, 2024 | Linkage analysis |
| Feb. 7, 2024 | QTL analysis |
| Feb. 14, 2024 | QTL analysis |
| Feb. 21, 2024 | No Class (Winter Term Break) |
| Feb. 28, 2024 | No Class (Prairie Grain Development Committee Meeting) |
| Mar. 6, 2024 | QTL analysis |
| Mar. 13, 2024 | QTL analysis |
| Mar. 20, 2024 | Association mapping |
| Mar. 27, 2024 | Association mapping |
| Apr. 3, 2024 | Association mapping |
| Apr. 10, 2024 | Class wrap-up, review, Q & A |

Course Evaluation Schedule:

| Date | Evaluation Method | Grade % |
|------------------|----------------------------|---------|
| Feb. 7, 2024 | Assignment #1 | 20% |
| Mar. 20, 2024 | Assignment #2 | 20% |
| Apr. 10, 2025 | Assignment #3 | 20% |
| TBA ¹ | Presentation #1 | 15% |
| TBA ¹ | Presentation #2 | 15% |
| TBA ² | Discussion / Participation | 10% |

¹ Presentation schedule will be provided in first or second lecture.

² Based on participation in the class discussions, asking questions following student presentations, etc.

Grading

The following grading scale will be applied to this course.

| Letter Grade | Percentage out of 100 | Grade Point Range | Final Grade Point |
|--------------|-----------------------|-------------------|-------------------|
| A+ | 90 - 100 | 4.25 - 4.5 | 4.5 |
| A | 80 - 89.9 | 3.75 - 4.24 | 4.0 |
| B+ | 74 - 79.9 | 3.25 - 3.74 | 3.5 |
| B | 68 - 73.9 | 2.75 - 3.24 | 3.0 |
| C+ | 62 - 67.9 | 2.25 - 2.74 | 2.5 |
| C | 56 - 61.9 | 2.00 - 2.24 | 2.0 |
| D | 50 - 55.9 | Less than 2.0 | 1.0 |
| F | Less than 50 | | 0 |

Voluntary Withdrawal

| | |
|---------------|---|
| Jan. 19, 2024 | Last date to DROP Fall term courses with refund |
| Mar. 20, 2024 | Voluntary Withdrawal (VW) deadline (no refund) |

Students who did not drop the course by these deadlines will be assigned a final grade. Voluntary Withdrawal courses will be recorded on official transcripts. Please refer to the [Registrar's Office](#) web page for more information. I am willing to discuss student's progress and strategies for improvement prior the withdrawal date.

Other Important Dates

| | |
|-------------------------------|---------------------------------|
| Feb. 19, 2024 - Feb. 23, 2024 | Winter Term Break – no classes. |
| Mar. 29, 2024 | Good Friday – no classes. |
| Apr. 10, 2024 | Last day of classes. |

ASSIGNMENT DESCRIPTIONS

Assignments are intended to provide students with hands-on experience utilizing genetic mapping software. Students are expected to work on their own, so that they become completely familiar with each piece of software and can interpret the obtained results. Each assignment will come with a complete set of instructions.

Presentations are intended to provide students with practice summarizing genetic research and presenting the material in an engaging and information fashion. Each student will be assigned two research papers to present to the class. The presentation schedule will be determined at the beginning of the term. Presentations will be 15 minutes in length, with 5 minutes for discussion. Presentations will include a brief introduction, key results, and a summary/conclusions. Students must read all papers and have 1 to 2 questions prepared for discussion. Students will participate in the evaluation of their peers.

Referencing Style

Not applicable.

Assignment Feedback

Students will receive formative (i.e., comments) or summative (i.e., grade) feedback on their assignments and presentations. This feedback will be on paper and/or electronically. Grades will be provided with 14 days of due dates for the assignments. Evaluative feedback will be given to the students prior to the voluntary withdrawal deadline.

Assignment Extension and Late Submission Policy

The due dates for the assignments are flexible and can be changed if the class is struggling with a particular deadline. All changes to assignment due dates will be applied to all students to ensure everyone is treated equally. In general, assignments that are submitted after the due date will be reduced by 10% of the value of the assignment per day late.

UM Policies

As a student at the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The University of Manitoba (UM) website's [Governing Documents](https://umanitoba.ca/governance/governing-documents) (<https://umanitoba.ca/governance/governing-documents>) is one important source of information, in particular the Academic and Students sections. The Student Advocacy office can also help you understand policies and procedures; find their information in the UM Learner Supports section below.

Academic Calendar

The [Academic Calendar](https://umanitoba.ca/registrar/academic-calendar) (<https://umanitoba.ca/registrar/academic-calendar>) is the University's official publication containing course descriptions, program and graduation requirements, as well as UM and faculty/school-specific rules, regulations and policies. In particular, familiarize yourself with the sections *University Policies and Procedures* and *General Academic Regulations*.

Academic Integrity

In addition to reviewing your instructor's academic integrity policy listed in their syllabus, you are expected to view the *General Academic Regulation* section within the [Academic Calendar](https://umanitoba.ca/registrar/academic-calendar) (<https://umanitoba.ca/registrar/academic-calendar>) and specifically read the regulation pertaining to Academic Integrity. Ask your instructor for additional information about demonstrating academic integrity in your academic work, and consult the following UM resources for more information and support:

- [Academic Integrity](https://umanitoba.ca/student-supports/academic-supports/academic-integrity) (<https://umanitoba.ca/student-supports/academic-supports/academic-integrity>)
 - [Student Resources](https://umanitoba.ca/student-supports/academic-supports/academic-integrity#resources-to-conduct-academic-work-with-integrity) (<https://umanitoba.ca/student-supports/academic-supports/academic-integrity#resources-to-conduct-academic-work-with-integrity>)
 - [Academic Misconduct and How to Avoid It](https://umanitoba.ca/student-supports/academic-supports/academic-integrity#academic-misconduct-and-how-to-avoid-it) (<https://umanitoba.ca/student-supports/academic-supports/academic-integrity#academic-misconduct-and-how-to-avoid-it>)
- [Student Advocacy Office](https://umanitoba.ca/student-supports/academic-supports/student-advocacy) (<https://umanitoba.ca/student-supports/academic-supports/student-advocacy>)

Copyright

All students are required to respect copyright as per Canada's *Copyright Act*. Staff and students play a key role in the University's copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world. The [Copyright Office](https://umanitoba.ca/copyright/) (<https://umanitoba.ca/copyright/>) provides copyright resources and support for all members of the University of Manitoba community.

Grade Appeals

If you have questions about your grades, talk to your instructor. There is a process for term work and final grade appeals. Note that you have the right to access your final examination scripts. See the [Registrar's Office](https://umanitoba.ca/registrar/grades/appeal-grade) (https://umanitoba.ca/registrar/grades/appeal-grade) for more information including appeal deadline dates and the appeal form.

Intellectual Property

For information about rights and responsibilities regarding intellectual property view the [Intellectual Property Policy](https://umanitoba.ca/governance/governing-documents/governing-documents-university-community#intellectual-property) (https://umanitoba.ca/governance/governing-documents/governing-documents-university-community#intellectual-property)

Program-Specific Regulations

For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective [faculty/college/school](https://umanitoba.ca/academics) website (https://umanitoba.ca/academics).

Respectful Work and Learning Environment

The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected to conduct yourself in an appropriate and respectful manner. Policies governing UM community behaviour include:

- [Respectful Work and Learning Environment](https://umanitoba.ca/about-um/respectful-work-and-learning-environment-policy) (https://umanitoba.ca/about-um/respectful-work-and-learning-environment-policy)
- [Student Discipline](https://umanitoba.ca/governance/governing-documents-students#student-discipline) (https://umanitoba.ca/governance/governing-documents-students#student-discipline)
- [Violent or Threatening Behaviour](https://umanitoba.ca/governance/governing-documents-students#violent-or-threatening-behaviour) (https://umanitoba.ca/governance/governing-documents-students#violent-or-threatening-behaviour)

The UM website, [Engaging in Respectful Conduct](https://umanitoba.ca/student-supports/respectful-conduct) (https://umanitoba.ca/student-supports/respectful-conduct), includes more details about expectations for behaviours related to university activities.

Sexual Violence Policies

The UM has several policies and procedures that deal with the rights and responsibilities of the University community with regards to all forms of sexual violence. For a comprehensive list of policies and associated resources, visit the [Sexual Violence Resource Centre's information page](#). Please note that there are many supports available in addition to these policy documents (see UM Learner Supports).

Voluntary Withdrawal

Voluntary withdrawal (VW) is a way for students to leave a class without academic penalty once the Registration Revision Period has ended. If you opt to voluntarily withdraw from a course, you will not be eligible for a refund and, if applicable, will still be required to pay any outstanding tuition fees for the course. On your transcript, the course you have withdrawn from will be listed; however, "VW" will appear in lieu of a grade. If you do not drop a course before the VW deadline, you will receive a final grade in the course on your transcript.

Please note that there are separate deadlines for dropping a course early in a term during the Registration Revision Period. Dropping a course means you are removing that course from your schedule, will not be charged tuition fees for that course, and the course will not appear on your transcript.

The Registrar's Office website, [Withdraw from a Course](https://umanitoba.ca/registrar/withdraw-course) (<https://umanitoba.ca/registrar/withdraw-course>), includes more information on the different ways in which you can withdraw from a course and important dates and deadlines to do so.

UM Learner Supports

Below you will find a select list of important supports for learners at the UM, both academic supports and otherwise. For a complete listing of all learner supports at the University of Manitoba, visit the [Student Supports website](https://umanitoba.ca/student-supports) (<https://umanitoba.ca/student-supports>).

Academic Advising

Contact an [Academic Advisor](https://umanitoba.ca/student-supports/academic-supports/academic-advising) (<https://umanitoba.ca/student-supports/academic-supports/academic-advising>) for support with degree planning and questions about your academic program and regulations.

Academic Learning Centre (ALC)

The [Academic Learning Centre](https://umanitoba.ca/student-supports/academic-supports/academic-learning) (<https://umanitoba.ca/student-supports/academic-supports/academic-learning>) offers one-to-one tutoring, groups study sessions and workshops, as well as video and tip-sheet resources to help you throughout your academic program. All Academic Learning Centre programming, supports, and services are free for UM students.

Make an appointment for [free one-to-one tutoring](https://umanitoba.ca/student-supports/academic-supports/academic-learning/tutoring-group-study#individual-tutoring) (<https://umanitoba.ca/student-supports/academic-supports/academic-learning/tutoring-group-study#individual-tutoring>). **Content tutors** (over 90 UM courses) can help you understand concepts and learn problem-solving strategies. **Study skills tutors** can help you improve your skills such as time management and goal setting, reading and note-taking, as well as learning and test-taking strategies. **Writing tutors** can give you feedback on your academic writing, whether you are just getting started on a written assignment or already have a draft. **English as an Additional Language** specialist, Antoanela Denchuk, is available for one-to-one tutoring to help you improve your English-language academic writing skills. Use the drop-down menu, read the tutor biographies, and

make an appointment for tutoring on the [Academic Learning Centre schedule](https://manitoba.mywconline.com/) (<https://manitoba.mywconline.com/>).

Attend [Supplemental Instruction \(SI\)](https://umanitoba.ca/student-supports/academic-supports/academic-learning/tutoring-group-study) (<https://umanitoba.ca/student-supports/academic-supports/academic-learning/tutoring-group-study>) sessions in historically difficult courses (including Chemistry, Engineering, and Computer Science). These free weekly review sessions are facilitated by a peer mentor who has previously taken the course and provide an opportunity to discuss course content, ask questions, compare notes, solve practice problems, and develop study strategies. See online for a list of SI courses and meeting times.

Register for an [Academic Success Workshop](https://umanitoba.ca/student-supports/academic-supports/academic-learning/academic-success-workshops) (<https://umanitoba.ca/student-supports/academic-supports/academic-learning/academic-success-workshops>), where you can learn strategies to improve your writing and studying. More information on topics, dates, and registration, are found online.

Register for [Faculty of Graduate Studies Grad Steps Workshops](https://umanitoba.ca/graduate-studies/student-experience/graduate-student-workshops) (<https://umanitoba.ca/graduate-studies/student-experience/graduate-student-workshops>). These workshops are specifically designed for students working towards **Master's degrees or PhDs**. More information on topics, dates, and registration can be found online.

Access the Academic Learning Centre's collection of [videos and tip sheets](https://umanitoba.ca/student-supports/academic-supports/academic-learning#tip-sheets-for-writing-and-study-skills) (<https://umanitoba.ca/student-supports/academic-supports/academic-learning#tip-sheets-for-writing-and-study-skills>) to help you with many of the academic tasks you'll encounter in university.

Contact the Academic Learning Centre by calling 204-480-1481 or emailing academic_learning@umanitoba.ca. Bannatyne students can contact the Bannatyne Student Services office at 204-272-3190.

Basic Needs

It can be difficult to learn and succeed in courses when you are struggling to meet your or your family's basic needs. Several UM and community resources are listed below if you would benefit from support with regards to housing, food, finances, and/or childcare:

- *Housing*
 - [UM Housing](https://umanitoba.ca/housing) (<https://umanitoba.ca/housing>)
 - [Manitoba Residential Tenancies Branch](https://www.gov.mb.ca/cca/rtb/) (<https://www.gov.mb.ca/cca/rtb/>)
 - [HOPE End Homelessness Winnipeg Services & Supports](https://umanitoba.ca/housing) (<https://umanitoba.ca/housing>)
- *Food*
 - [U of M Food Bank](https://umanitoba.ca/financial-aid-and-awards/u-m-food-bank) (<https://umanitoba.ca/financial-aid-and-awards/u-m-food-bank>)
 - [Food Matters Manitoba](https://foodmattersmanitoba.ca/find-emergency-food-in-winnipeg/) (<https://foodmattersmanitoba.ca/find-emergency-food-in-winnipeg/>)
- *Finances*
 - [UM Financial Aid and Awards](https://umanitoba.ca/financial-aid-and-awards) (<https://umanitoba.ca/financial-aid-and-awards>)

- [Manitoba Student Aid](https://www.edu.gov.mb.ca/msa/) (https://www.edu.gov.mb.ca/msa/)
- *Child Care*
 - [UM Child Care](https://umanitoba.ca/about-um/child-care) (https://umanitoba.ca/about-um/child-care)
 - [Manitoba Child Care Subsidy](https://bit.ly/3yG3ijy) (https://bit.ly/3yG3ijy)
 - [Manitoba Child Care Association](https://mccahouse.org/looking-for-child-care/) (https://mccahouse.org/looking-for-child-care/)

English Language Centre

The [English Language Centre \(ELC\)](https://umanitoba.ca/english-language-centre) (https://umanitoba.ca/english-language-centre) provides courses, tests, accommodations and individual support to students whose first language is not English in order to support academic success and participation in the University of Manitoba community.

Health and Wellness

Physical, mental, emotional, and spiritual health and wellness play a critical role in student success. See all of UM's resource on their [Health and Wellness](https://umanitoba.ca/student-supports/student-health-and-wellness) (https://umanitoba.ca/student-supports/student-health-and-wellness) website, and make note of several specific UM and community supports listed below.

Winnipeg Urgent Physical and Mental Health Care

If you are an adult experiencing a mental health or psychosocial crisis, contact the [Klinik Community Health](https://klinik.mb.ca/crisis-support/) (https://klinik.mb.ca/crisis-support/) 24/7 crisis line at 204-786-8686, visit the [Crisis Response Centre](https://sharedhealthmb.ca/services/mental-health/crisis-response-centre/) (https://sharedhealthmb.ca/services/mental-health/crisis-response-centre/) located at 817 Bannatyne Avenue, or contact the Mobile Crisis Service at 204-940-1781.

To speak with a nurse for guidance on what health-care path to take for the issue you are facing or for general information about health resources available in Manitoba, contact [Health Links](https://misericordia.mb.ca/programs/phcc/health-links-info-sante/) (https://misericordia.mb.ca/programs/phcc/health-links-info-sante/) at 1-888-315-9257 (toll free).

If you need urgent medical care, visit the Winnipeg Regional Health Authority's [Emergency Department & Urgent Care Wait Times](https://wrha.mb.ca/wait-times/) webpage (https://wrha.mb.ca/wait-times/) for a list of locations and current wait times.

Student Counselling Centre (SCC)

The [Student Counselling Centre](https://umanitoba.ca/student-supports/student-health-and-wellness/student-counselling-centre-scc) (https://umanitoba.ca/student-supports/student-health-and-wellness/student-counselling-centre-scc) provides free counselling and mental health support to UM, English Language Centre, and International College of Manitoba (ICM) students. We are open year-round, Monday through Friday from 8:30 am to 4:30 pm. Our commitment is to offer a support service to every student who contacts us.

Visit the SCC's [For Urgent Help](https://umanitoba.ca/student-supports/student-health-and-wellness/student-counselling-centre-scc#for-urgent-help) (https://umanitoba.ca/student-supports/student-health-and-wellness/student-counselling-centre-scc#for-urgent-help) webpage or the urgent care resources listed above if you require immediate support.

Visit the SCC's [Our Services](https://umanitoba.ca/student-supports/student-health-and-wellness/student-counselling-centre-scc#for-urgent-help) (https://umanitoba.ca/student-supports/student-health-and-wellness/student-counselling-centre-scc#for-urgent-help) webpage for more information on accessing a variety of services including individual counselling, counselling workshops and groups, support resources, and learning disability assessment services.

The SCC is located at 474 UMSU University Centre (Fort Garry Campus).

Health and Wellness Office

Students often juggle multiple demands, and we recognize that it can be difficult to find balance. For any changes you want to make to your health and wellness, the Health and Wellness Office at the University of Manitoba would like to support you in your journey. We are here to help you take control of your own health and make your own decisions. We are a judgment-free space and we avoid labels whenever possible. For more information, please visit the [Health and Wellness Office](https://umanitoba.ca/student-supports/health-wellness) (https://umanitoba.ca/student-supports/health-wellness) website.

Spiritual Care and Multifaith Centre

Spiritual care services are available to all, whether you identify as spiritual, atheist, religious or agnostic. [Spiritual Services](https://umanitoba.ca/student-supports/spiritual-services) (https://umanitoba.ca/student-supports/spiritual-services) also offer specific denominational support for certain religious groups and by Indigenous Elders-in-Residence.

Student Support Case Management (SSCM)

Contact the [Student Support Case Management team](https://umanitoba.ca/student-supports/academic-supports/student-advocacy/case-management) (https://umanitoba.ca/student-supports/academic-supports/student-advocacy/case-management) if you are concerned about yourself or another student and don't know where to turn. SSCM helps connect students with on and off campus resources, provides safety planning, and offers other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team.

University Health Service (UHS)

The [University Health Service](https://umanitoba.ca/student-supports/health-wellness/university-health-service) (https://umanitoba.ca/student-supports/health-wellness/university-health-service) offers a full range of medical services to students, including psychiatric consultation, via two health clinics:

- Fort Garry Campus: (204) 474-8411, ACW-Lot temporary trailer (behind the Isbister building)
- Bannatyne Campus: (204) 474-8411, P309 – Pathology Building

Student Services at Bannatyne Campus

Student Services at Bannatyne Campus (SSBC) offers a full range of mental health supports to students and residents in the Rady Faculty of Health Sciences, along with other academic and personal supports. Visit the [SSBC website](https://umanitoba.ca/student-supports/student-services-bannatyne-campus) (https://umanitoba.ca/student-supports/student-services-bannatyne-campus) for a list of services available.

Indigenous Students

Staff, faculty and Elders are well-equipped to ensure your university experience is as beneficial, accessible, and successful as possible. Visit the Indigenous [Student Experience](https://umanitoba.ca/indigenous/student-experience) (https://umanitoba.ca/indigenous/student-experience) website for more information on the supports and services available.

International Students

The transition to a new country and a new academic system can be both exciting and overwhelming. The International Centre (IC) is here to help you settle into life at University of Manitoba. Visit the [International Students](https://umanitoba.ca/current-students/international) website (https://umanitoba.ca/current-students/international) for more information.

Sexual Violence Support and Education

Sexual violence affects people of all ages, sexual orientations, genders, gender identities, abilities and relationship statuses. At the U of M, we are committed to ensuring a respectful work and learning environment for all. We want to build a safe and inclusive campus community where survivors of sexual violence know they can receive the supports they need to succeed, both academically and personally.

The [Sexual Violence Resource Centre](https://umanitoba.ca/sexual-violence) (https://umanitoba.ca/sexual-violence), located at 537 UMSU University Centre (Fort Garry campus) provides support, resources, information and referral services for any student, faculty or staff member who has been affected by sexual violence.

Student Accessibility Services (SAS)

The University of Manitoba is committed to providing an accessible academic community. [Student Accessibility Services](https://umanitoba.ca/student-supports/accessibility) (https://umanitoba.ca/student-supports/accessibility) offers academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g., mental health, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation. SAS is located at 520 University Centre (Fort Garry Campus).

Student Advocacy

[Student Advocacy](https://umanitoba.ca/student-supports/academic-supports/student-advocacy) (<https://umanitoba.ca/student-supports/academic-supports/student-advocacy>) is a safe place for students. We help you navigate university processes and advocate for your rights as a student at UM. If anything in your personal or academic life is affecting your studies, contact our confidential intake assistant by phone (204-474-7423) or email (stadv@umanitoba.ca).

University of Manitoba Libraries (UML)

As the primary contact for all research needs, your liaison librarian can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you in-person. A [complete list of liaison librarians](http://bit.ly/WcEbA1) (<http://bit.ly/WcEbA1>) can be found by subject.

In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult the [UM Libraries and Departments](https://libguides.lib.umanitoba.ca/c.php?g=298526) (<https://libguides.lib.umanitoba.ca/c.php?g=298526>) webpage. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the [University of Manitoba Libraries' homepage](https://umanitoba.ca/libraries/) (<https://umanitoba.ca/libraries/>)