

Plant Physiology PLNT/BIOL 3400



University of Manitoba

**Faculty of Agricultural and Food Sciences
Department of Plant Science**

**Faculty of Sciences
Department of Biological Sciences**

COURSE DETAILS

Course Title & Number: Plant Physiology PLNT/BIOL 3400

Number of Credit Hours: 3

Class Times & Days of Week: Class: 12:30 pm - 1:20 pm MWF, Lab: 2:30-5:30 MT

Location for classes/labs/tutorials: Class **Animal Science 219**; Lab **Duff Roblin W232**

Instructor Contact Information

Instructor(s) Name: Dr. Stasolla and Dr. Renault

Preferred form of Address : name

Office Location: Stasolla (Agriculture Bld. 225); Renault (Duff Roblin, W479)

Office hours availability: please arrange a meeting via e-mail

Office phone number: Stasolla (474-6098), Renault (474-6914)

Health Emergency

- **Call 911, then call campus security (204 474 9341)**, 555 from university phones, #555 from Bell MTS or Rogers Wireless, any emergency phone on campus)
- Animal Science Building address (**12 Dafoe Road**) is required when calling 911
- **For First Aider assistance and/or to access first aid kits contact the Animal Science Office, room 201** in the Animal Science/Entomology Building **or call 204 474 9383**

Course Description

An integrative view of major physiological processes in plants, spanning the biochemical, cellular, tissue, organ and whole plant levels of organization. The focus will be on photosynthesis, respiration, plant water relations, plant mineral nutrition, and the role of hormonal and extrinsic factors in the regulation of plant growth. PLNT 3400 – BIOL 3400 is a key course in plant biology because it explores how physiological processes affect plant behavior. Therefore, in order to understand how plants respond to the environment it is important to appreciate plant physiology. Any student interested in having a general knowledge in plant biology should take this course. The

course, which covers basic physiological processes related to vegetative and reproductive growth of plants, is important for understanding how plants “work”. Therefore, it complements information covered by other disciplines of the curriculum, including agronomy, plant pathology, plant ecology, genetics and breeding.

Course information

The course will cover the following aspects/events

I – Photosynthesis

- The capture of light energy and its conversion into organic compounds
- Photorespiration and photosynthetic processes
- Photosynthetic efficiency: C 3 and C 4 plants
- Solute transport and assimilate partitioning

II – Respiration

- Function of respiration
- Factors affecting respiration

III – Control of growth and development

- Plant hormones: Auxins, gibberellins, cytokinins, abscisic acid and ethylene

IV – Plant water relations

- Properties of water
- Water potentials
- Water transport in plants
- Transpiration

V – Mineral nutrition

- Essential elements
- The soil: reservoir of nutrients
- Membrane transport processes
- Nutrient uptake and transport
- Function and deficiency symptoms

VI– External factors and plant growth

Plant movements (tropisms and nastic responses)
Measuring time

The course information will be reviewed in more details during the first day of class.

Course goals

The goals of the course are:

- 1) to make students aware of basic aspects of plant physiology and appreciate how structure relates to function.
- 2) to encourage a multidisciplinary approach to understand plant behavior.
- 3) to understand how any plant response and behavior is governed by plant physiology.
- 4) to have an appreciation of how biological processes interact to trigger a response.

Learning outcomes

- 1) Ability to critically analyze and summarize scientific information
- 2) Ability to deliver information effectively through written communication
- 3) Creativity in testing specific hypothesis using a multidisciplinary approach
- 4) Ability to prioritize information

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.

Recording Class Lectures and Labs

Dr. Renault and Dr. Stasolla and the University of Manitoba hold copyright over the course materials, presentations and lectures which form part of this course. **No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part**

without permission from Dr. Renault and Stasolla. Course materials (both paper and digital) are for the participant's private study and research.

Textbook

L.Taiz and E. Zeiger, Plant Physiology, Fifth Edition (2010) or Sixth Edition (2015) (required), and lab handouts created by instructors (required, they will be posted on UMLearn)

Course technology

It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. The student can use all technology in classroom setting only for educational purposes approved by instructor and/or the University of Manitoba Student Accessibility Services. Students should not participate in personal direct electronic messaging / posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) online and offline "gaming" during scheduled class time. If student is on call (emergency) the student should switch his/her cell phone on vibrate mode and leave the classroom before using it.

Generative Artificial Intelligence

The use of generative artificial intelligence tools (genAI) or apps for lab assignments or poster in this course, including tools like ChatGPT and other AI writing or coding assistants, **is prohibited**.

Class communication

The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit:

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

Please note that all communication between myself and you as a student must comply with the electronic communication with student policy

(http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html). You are required to obtain and use your U of M email account for all communication between yourself and the university.

Expectations

I will be in class for 10 minutes prior to class time and after, if requested. I will treat you with respect and would appreciate the same courtesy in return. See Respectful Work and Learning Environment

Policy. A large part of my teaching practice includes the use of questions in class. I expect students to respond but I do not expect perfection.

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 provides copyright resources and support for all members of the University of Manitoba community. Visit <http://umanitoba.ca/copyright> for more information.

Timeline for electronic inquiry response

Please be respectful of the specific reply timelines that faculty members or staff members set for your course. Generally, when a faculty member or staff member receives an electronic inquiry from you they will try to reply within one or two business days of receipt of the email. It is understood that sometimes the reply may come sooner or in some instances later than this, with a normal response envelope between 1-3 business days.

New Student Absence Policy

See [Governing Documents: Students | Governance | University of Manitoba \(umanitoba.ca\)](#) for the new student absence policy and procedure which requires students to complete a self-declaration form for temporary absences.

It is the student responsibility

False declarations are considered a breach of academic integrity and can result in discipline

Your rights and responsibilities

As a student of 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 [Academic Calendar](http://umanitoba.ca/student/records/academiccalendar.html) <http://umanitoba.ca/student/records/academiccalendar.html> is one important source of information. View the sections *University Policies and Procedures* and *General Academic Regulations*.

While all of the information contained in these two sections is important, the following information is highlighted.

- 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 website for more information including appeal deadline dates and the appeal form <http://umanitoba.ca/registrar/>

- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the **Academic Integrity** regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support <http://umanitoba.ca/academicintegrity/> View the **Student Academic Misconduct** procedure for more information.
- 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 respectful manner. Policies governing behavior include the:

Respectful Work and Learning Environment

http://umanitoba.ca/admin/governance/governing_documents/community/230.html

Student Discipline

http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html

Support available to students

Writing and Learning Support

The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor's feedback.

These Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at:

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

You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 201 Tier Building.

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 can be found by subject: <http://bit.ly/WcEbA1>. 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. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries' homepage: www.umanitoba.ca/libraries.

Student Counselling Centre

Contact SCC if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. SCC offers crisis services as well as individual, couple, and group counselling. *Student Counselling Centre:* <http://umanitoba.ca/student/counselling/index.html>

474 University Centre or S207 Medical Services
(204) 474-8592

Student Support Case Management

Contact the Student Support Case Management team 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.

Student Support Intake Assistant <http://umanitoba.ca/student/case-manager/index.html>

520 University Centre
(204) 474-7423

University Health Service

Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical services to students, including psychiatric consultation.

University Health Service <http://umanitoba.ca/student/health/>

104 University Centre, Fort Garry Campus
(204) 474-8411 (Business hours or after hours/urgent calls)

Health and Wellness

Contact our Health and Wellness Educator if you are interested in information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault.

Health and Wellness Educator <https://umanitoba.ca/student/health-wellness/welcome-about.html>

Live Well @ UofM

For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site:

<http://umanitoba.ca/student/livewell/index.html>

Violent or Threatening Behaviour

http://umanitoba.ca/admin/governance/governing_documents/community/669.html

- If you experience **Sexual Assault** or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The **Sexual Assault** policy may be found at:
http://umanitoba.ca/admin/governance/governing_documents/community/230.html More information and resources can be found by reviewing the Sexual Assault site
<http://umanitoba.ca/student/sexual-assault/>
- For information about rights and responsibilities regarding **Intellectual Property** view the policy https://umanitoba.ca/admin/governance/governing_documents/community/235.html

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 web site

<http://umanitoba.ca/faculties/>

Contact an **Academic Advisor** within our faculty/college or school for questions about your academic program and regulations <http://umanitoba.ca/academic-advisors/>

Student Advocacy

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns. <http://umanitoba.ca/student/advocacy/>

Students Accessibility Services

If you are a student with a disability, please contact SAS for 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 <http://umanitoba.ca/student/saa/accessibility/>
 520 University Centre
 204 474 7423
Student_accessibility@umanitoba.ca

Class schedule

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 the – ROASS- Procedure

Date	Class Content	Required Readings	Evaluation
Sept 4 - Sept 23	Photosynthesis	Textbook	Mid-term and Final
Sept 25- Oct 7	Respiration	Textbook	Mid-term and Final
Oct 9 - Oct 16	Control of growth and development	Textbook	Mid-term and final
Oct 21 - Nov 4	Plant Water Relations	Textbook	Final
Nov 6 - Nov 27	Mineral nutrition	Textbook	Final
Nov 29 – Dec 9	External factors and plant growth	Textbook	Final

Lab schedule

Date	Lab Content	Required Readings	Evaluation
Sept 9/10	Introduction tutorial (how to prepare figures and tables)	Lab handout	No
Sept 16/17	Photosynthesis	Textbook and lab handout	Individual or group lab assignment due Sept 23/24 (5%)
Sept 23/24	Hormone Lab I Tutorial on lab report	Textbook and lab handout	Group lab report – draft Intro Due Sep 30/Oct 1 (1%)
Sep 30/Oct 1	No Lab		
Oct 7/8	Hormone Lab II Tutorial on lab report	Textbook and lab handout	Group lab report Draft M&M, plots and results due Oct 21/22 (1%)
Oct 14/15	No lab		
Oct 21/22	Hormone Lab III Tutorial on lab report	Textbook and Lab handout	Group lab report Draft discussion and abstract Due 28/29 (1%)
Oct 28/29	No lab		
Nov 4/5	Hormone Lab IV	Textbook and Lab handout	Draft revision Final report due Nov 18/19 (12%)
Nov 11/12	No lab		
Nov 18/19	Water relation	Textbook and lab handout	Individual or group lab assignment due Nov 25/26 (5%)
Nov 25/26	Nutrient deficiency I	Textbook and lab handout	No
Dec 2/3	Nutrient deficiency II and plant movements	Textbook and lab handout	Quiz on nutrient deficiency during the lab (5%)

Attendance is compulsory. Students missing labs cannot write the report/assignment.

Course evaluation methods

Due Date	Assessment Tool	Value of Final Grade
12:30 pm, Friday Oct 18, 2023	Mid-Term exam	25%
TBD	Final exam	45%
See lab schedule	Lab assignments/reports	30%

To pass the course a minimum grade of 50% is required for both the lab (assignments, report and quiz) and lecture (mid term exam + final exam)

Grading

Letter Grade	Percentage out of 100	Grade Point Range	Final Grade Point
A+	90-100	4.25-4.5	4.5
A	80-89	3.75-4.24	4.0
B+	74-79	3.25-3.74	3.5
B	68-73	2.75-3.24	3.0
C+	62-67	2.25-2.74	2.5
C	56-61	2.0-2.24	2.0
D	50-55	Less than 2.0	1.0
F	Less than 50		0

Reference style

Reference style for this course should be according to the journal **Physiologia Plantarum**. Use the following link: <http://physiologiaplantarum.org/instructions-for-manuscrip/> See section “citations and references”

Assignment description

The mid-term examination will cover material from the following topics: Photosynthesis, Respiration and Hormones. The final examination will cover material from all topics outlined in the course description section.

Assignment grading time

Grades will be available 10 days after the completion of the respective assignment

Late submission policy and important dates

Late Assignments

A penalty of **20% per day** will be applied for any late lab assignment or report

Missed Assignments

A **0% grade** will be given for any missed lab assignment or report

Missed Exams

A **0% grade** will be given for any missed exam

Voluntary withdrawal date

Last day for voluntary withdrawal is **Nov 19, 2024**. Upon request students will be provided with verbal feedback about their performance.

Information provided by the Faculty of Science - Fall 2024

How to succeed in your science courses?

The Faculty of Science is committed to delivering the high-quality education our students have come to expect. We also want to ensure that you set yourself up for success. We want you to succeed!

1. Registration revision period: Use the [registration revision period](#) to evaluate course syllabus. During the registration revision period you will be able to drop or add courses without any financial consequence. Speak directly with instructors if you have any questions specific to their course.
2. Evaluate workload: Take time to consider the workload associated with the course schedule you are planning. Be realistic about other commitments and distractions that are part of everyday life and make your course selection decisions accordingly. Please consider watching this presentation from the Academic Learning Centre for [Managing Your Time Effectively](#). If you want to discuss anything, [talk to an Academic advisor in your faculty](#).
3. Commitment to study: For an average course, you should aim to commit at least three hours of studying for every hour of lecture. Make sure you keep up with studying on a consistent basis.
4. Reach out for help: If you experience issues learning the course material, reach out to your instructor, teaching assistants, supplemental instruction leaders or [Academic Learning Centre](#) for the course as soon as possible. Most content builds on previous content and deficiencies in understanding will cascade issues throughout the course. For questions about your degree program or if life stresses hinder your academic performance, contact your faculty's academic advisors immediately.
5. Learn efficiently, learn to take notes: During the pandemic, many lectures were delivered asynchronously so students had a chance to review lecture videos when they did not catch something during the lecture. Students in lectures delivered in-person will not have the luxury of rewatching a live lecture. Therefore, you may want to review some [note-taking tips](#) offered by the [Academic Learning Centre](#) which can help you learn efficiently.

University of Manitoba policies

As a student at the University of Manitoba (UM) 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 UM website's [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](#) is the University's official publication containing course descriptions, program and graduation requirements, as well as UM and faculty or school-specific rules, regulations and policies. In particular, familiarize yourself with the sections university policies and procedures and general academic regulations.

Learner support

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](#).

Academic advising

Contact an [academic advisor](#) for support with degree planning and questions about your academic program and regulations.

Academic Learning Centre (ALC)

The [Academic Learning Centre](#) 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 programing, supports and services are free for UM students.

Make an appointment for [free one-to-one 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](#).

Attend [Supplemental Instruction \(SI\)](#) 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](#), where you can learn strategies to improve your writing and studying. More information on topics, dates and registration are found online.

Access the Academic Learning Centre's collection of [videos and tip sheets](#) 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.

University of Manitoba Libraries

Research begins at UM Libraries. Learn at the Libraries is a great place to start, with information for students on academic writing, how to search the library, evaluating resources and writing citations. 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 locating appropriate resources or managing citations 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 online. When

working remotely, students can also receive help online through Ask Us! chat. For further detail about the libraries' services and collections, visit the Libraries' website.

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
 - o [UM Housing](#)
 - o [Manitoba Residential Tenancies Branch](#)
- Food
 - o [U of M Food Bank](#)
 - o [Food Matters Manitoba](#)
- Finances
 - o [UM Financial Aid and Awards](#)
 - o [Manitoba Student Aid](#)
- Child care
 - o [UM Child Care](#)
 - o [Manitoba Child Care Subsidy](#)
 - o [Manitoba Child Care Association](#)

English Language Centre

The [English Language Centre \(ELC\)](#) 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 UM community.

Health support

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](#) website and make note of several specific UM and community supports listed below.

Mental health support

Winnipeg Urgent Physical and Mental Health Care

If you are an adult experiencing a mental health or psychosocial crisis, contact the [Klinik Community Health](#) 24/7 crisis line at 204-786-8686, visit the [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](#) 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](#) webpage for a list of locations and current wait times.

Student Counselling Centre (SCC)

The [Student Counselling Centre](#) 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 a.m. to 4:30 p.m. Our commitment is to offer a support service to every student who contacts us.

Visit the SCC's [for urgent help](#) webpage or the urgent care resources listed above if you require immediate support.

Visit the SCC's [our Services](#) 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 UM 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](#) website.

Health and Wellness Educator <https://umanitoba.ca/student/health-wellness/welcome-about.html>
britt.harvey@umanitoba.ca

469 University Centre, Fort Garry Campus
(204) 295-9032

Spiritual Care and Multifaith Centre

Spiritual care services are available to all, whether you identify as spiritual, atheist, religious or agnostic. [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 \(SSCM\) team](#) 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.

Student Support Intake Assistant <http://umanitoba.ca/student/case-manager/index.html>

520 University Centre, Fort Garry Campus
(204) 474-7423

University Health Service (UHS)

Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical services to students, including psychiatric consultation.

University Health Service <http://umanitoba.ca/student/health/>

104 University Centre, Fort Garry Campus
(204) 474-8411 (Business hours or after hours/urgent calls)

Health And Safety

The UM is committed to maintaining a safe learning environment for all students, faculty, and staff.

Please stay home when you are feeling unwell.

Sexual violence support and education

Sexual violence affects people of all ages, sexual orientations, genders, gender identities, abilities and relationship statuses. At the UM, 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](#), 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.

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](#) 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 UM. Visit the [international students](#) website for more information.

Academic accommodations

Students who have, or think they may have, a disability (e.g., mental illness, learning, medical, hearing, injury-related, visual) are encouraged to contact [Student Accessibility Services](#) to arrange a confidential consultation. Instructors are notified by Student Accessibility Services what accommodations their registered students require which will help the instructor determine fair, feasible and reasonable academic accommodations without compromising academic standards. This takes time and planning, so reach out at the start of term.

SAS students can write their exams and tests in spaces organized by the SAS Exam Centre however they must register with the SAS Exam Centre a few weeks in advance. Please be sure to do so to receive the accommodations.

Medical notes and other documentation

The Self-Declaration for Brief and Temporary Absences Procedure and Policy is effective as of September 1, 2022 and therefore students will not be required to present medical or other documentation for absences due to extenuating circumstances of 120 hours or less, however [the self-declaration form for brief or temporary absence](#) must be completed and submitted to the instructor in lieu of the documentation. Please note that further documentation may be requested from students who claim multiple temporary absences or absences for more than 120 hours.

Short-term academic accommodations (up to 120 consecutive hours absences)

Students who miss a lab or assessment due to an extenuating brief or temporary absence should complete a [self-declaration of brief absence form](#) and submit it to their instructor **within 48 hours of the end of the brief absence**. The instructor will discuss with the student how the missed work can be made up.

- Students absent for **over 120 hours** as a result of medical, compassionate, University scholastic, University athletic or religious event will require official documentation to explain the absence. Students should reach out to instructors early if absences are anticipated.
- Personal vacations and work requirements are **not considered acceptable absences**.

Long-term academic accommodations

Students with long-term academic accommodations are usually registered with [Student Accessibility Services](#). The long-term academic accommodations are usually to accommodate long term physical or mental illness and accommodations can be in the form of notetaking, interpreting, assistive technology and assessment accommodations.

Final exams and deferred exams – Very Important!

If you have conflicting scheduled exams, you must contact your faculty/unit's academic advisors as soon as possible. If you miss your exam due to extenuating, brief or temporary circumstances listed in the Self-Declaration for Brief and Temporary Student Absences Policy, you can apply for a deferred exam.

These are not grounds for applying to write a deferred exam:

- **Feeling unprepared to write a final exam**
- **Wanting to strategize the timing of the writing of a final exam**

Faculty of Science students who have **deferred more than two terms of final exams** will be required to provide additional documentation (for example, medical note) beyond the self-declaration of brief absence form. Students who are not registered in the Faculty of Science should consult their faculty's/unit's policies on deferred exams. Providing fraudulent documents in support of a deferred exam application is a breach of the University's academic integrity policy and thus the student will be subject to investigation according to the [Student Discipline Bylaw](#). In cases of re-deferral requests or having deferred more than two terms of final exams, failure to provide supporting document with the necessary and relevant details will result in a final exam grade of 0. Students feeling ill and who may not be able to write their exam, should apply to write a deferred exam and not attempt to write their exam.

Deferred final exams are a privilege and are not always granted. Students are expected to be available to write the deferred exam within 30 days of the regular exam and they could be written **as early as January 6, 2025**. Students missing the deferred exam will be required to apply for a re-deferred exam which is typically held the next time the course is offered (that is, missing the Fall 2024 deferred exam may mean that the next opportunity to write will be Fall 2025). The content and structure of the deferred exam may be different from that written in the regular examination period. Students have a **responsibility** to check on the structure and expectations with the course instructor.

For students writing re-deferred exams, course instructors are not responsible for providing course content notes or answering content questions.

Missed lecture notes

Students missing lecture notes as a result of absences are responsible for obtaining the missed content on their own accord. Contact a classmate or the course instructor for their notes but please be aware the instructor is not obliged to create notes for students as a result of absences.

Voluntary Withdrawal (VW) policies

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, the course you have withdrawn from will be listed on your transcript; 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.

Students have the opportunity to voluntarily withdraw (VW) from this class up to November 21 ([in the event of date discrepancies, please follow the dates on the important dates and deadlines webpage](#)). By then, you will have received feedback to allow you to assess your progress and determine if you are achieving the grade you are aiming for in this course. If you are unlikely to be successful in the course, or not achieving the grade that you are aiming for, you should consider a VW from the course. In advance of the VW date, you should contact your instructor to review your progress in more detail, or you may discuss the VW option with a faculty academic advisor.

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](#), includes more information on the different ways in which you can withdraw from a course and important dates and deadlines to do so.

Professional conduct

Students in the University community can freely express their thoughts, opinions, and beliefs however they must observe the [respectful work and learning environment policy](#) and treat each other, staff and faculty with respect. Students who are alleged to have breached the Respectful Work and Learning Environment Policy will be investigated and disciplined according to the [student non-academic misconduct and concerning behaviour procedure](#).

Academic integrity

Academic integrity is taking responsibility for and being honest with your work and respecting the work of others. Since you are a member of the university community, we want you to learn what that responsibility and honesty entails and how we respect the work of others.

The Faculty of Science continues to uphold high standards of academic integrity. We know that you, our students, support us in this and we count on every one of you to do your part. We expect all students to strictly adhere to instructions from their professors regarding what resources can and cannot be used for assessments, to follow other rules the professors wish to set and to adhere to the academic conduct standards of the University and Faculty.

To aid professors in assuring that all forms of assessments have been administered fairly, the University can electronically monitor all tests, quizzes and examinations, included, but not limited to overseeing

chatrooms, relevant predatory websites and, in so doing, we will analyze scholastic evidence of individual exams.

Students who transgress academic integrity rules will be investigated and disciplined (if justified) according to the [student discipline by-law](#) and [student academic misconduct procedure](#).

The list of suggested minimum penalties assessed by the Faculty of Science for acts of academic misconduct is available on the website of the Faculty of Science.

Artificial Intelligence

Many of us have heard of, and perhaps even used, artificial intelligence tools like ChatGPT. Course instructors can decide whether generative artificial intelligence tools can be used in their courses. Artificial intelligence tools are not limited to generative artificial intelligence chatbots (for example ChatGPT) or image generators (for example DALL-E) but also writing and paraphrasing tools (for example Quillbot and Grammarly). Students who are unclear whether AI tools can be used in the course, it is the student's responsibility to clarify with the instructor.

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 provides copyright resources and support for all members of the UM community.

Please respect copyright. We will use copyrighted content in this course. No audio or video recording of the lectures is allowed in any format, openly or surreptitiously, in whole or in part without permission from the instructor. University guidelines state that copyrighted works, including those created by the course instructor, are made available for private study and research and must not be distributed in any format without permission. Since it is illegal, 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, visit [the University's Copyright Office website](#).

Your rights and responsibilities

As a student of the UM 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 [Academic Calendar](#) is one important source of information. View the sections of University Policies and Procedures and General Academic Regulations.

While all of the information contained in these two sections is important, the following information is highlighted.

- 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.

View the [Registrar's Office website](#) for more information including appeal deadline dates and the appeal form.

- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the **academic integrity** regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. [Visit the Academic Integrity Site for tools and support](#). View the **student academic misconduct** procedure for more information.
- 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 respectful manner. Policies governing behavior include the: [respectful work and learning environment, student discipline](#) and, [violent or threatening behaviour](#).
- If you experience **sexual assault** or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The **sexual violence** policy may be found at: <https://umanitoba.ca/governance/governing-documents/governing-documents-university-community#sexual-violence>. More information and resources can be found by reviewing the sexual assault site <http://umanitoba.ca/student/sexual-assault/>.

For information about rights and responsibilities regarding **intellectual property** [please view the policy](#).

For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective [faculty, college or school website](#).

[Contact an academic advisor within your registered faculty](#), college or school for questions about your academic program and regulations.

Student Advocacy

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns.

[Student Advocacy website](#)

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204 474 7423

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