STAT 4250: Statistical Learning, Winter 2023 (A01), CRN: 60145

Tentative Course Outline

Course Details

Course Title & Number:	Statistical Learning
Credit Hours:	3
Class Schedule:	11:30 AM–12:20 PM, MWF
Location for Lectures:	419 Machray Hall
Course Material:	All course materials will be posted on UMLearn website
Pre-Requisites:	[one of STAT 3100, the former STAT 3600, or the former STAT 3800] and STAT 3150 and [STAT 3690 or the former STAT 4690].
Course Description:	(Lab required) Topics related to the use of Statistics and inferential methods in machine learning, including the lasso and ridge regression, classification and clustering, neural networks, support vector machines, bagging, boosting and ensemble methods.

Instructor Contact Information

Instructor:	Mohammad Jafari Jozani
Office:	365 Machray Hall
Office Hours & Availability:	Mondays and Wednesdays from 1:15 pm to 2:00 pm. Feel free to ask me questions before, during and after the lectures in the classroom. If office hours are not convenient for you, please email me to arrange an alternate time to meet.
E-mail:	m_jafari_jozani@umanitoba.ca
	I will only respond to e-mail from UMNet ID's. When feasible, I normally return a call or an email within 24 hours.
Web Pages:	My personal website: https://www.complex-data-analytics.com/
	UM Learn: http://umanitoba.ca/umlearn
	Statistics: https://www.sci.umanitoba.ca/statistics

Tutorials and Lab

Lab Instructor:	Neve Loewen
E-mail:	loewenn9@myumanitoba.ca
Office:	347 Machray Hall
Office Hours & Availability:	Wednesdays 10:00–11:00 or by appointment.
Lab Time:	Mondays from 2:30 pm to 3:45 pm.
Lab Location:	316 Machray Hall

Attendance of lab tutorials is mandatory. During the tutorials, some selected theoretical and applied problems will be solved and solutions to some real data analysis using R will be provided. You can ask questions related to course content during the lab tutorials as well. The first few Labs are dedicated to teaching the basics of R, RStudio and R-markdown. Tutorials are designed to provide you with various practical hands-on computing experience on theory and applications.

General Course Information and Course Registration

In this course, you will learn some selected topics in statistical learning as we cover major techniques and concepts pertinent to both supervised and unsupervised learning. You will learn how and when to apply statistical learning techniques, their comparative strengths and weaknesses, and how to critically evaluate the performance of learning algorithms. The goal is to

(i) properly apply statistical learning methods and perform exploratory analysis,

(ii) properly select statistical learning models,

(iii) implement these methods using suitable programming languages such as R and/or Python,

(iv) correctly assess model fit and error, build an ensemble of learning algorithms.

Course Registration

It is **your responsibility** to ensure that you are entitled to be registered in this course. This means that you:

1. have the appropriate prerequisites, as noted in the calendar description, or have an appropriate permission from the instructor to waive these prerequisites;

2. have not previously taken, or are concurrently registered in, this course and another that has been identified as "not to be held with" in the course description.

The registration system may have allowed you to register in this course, but it is **your responsibility to check**. If you are not entitled to be in this course, you will be withdrawn, or the course may not be used in your degree program. There will be no fee adjustment. This is not appealable. Please be sure to read the course description for this and every course for which you are registered.

Textbook, Readings, Materials

I will be having my own course notes. However, the main textbooks for this course are listed below. Other references will be suggested during the course if required. You can download these references as I describe below. Lecture notes will be available through the UMLearn system. In this course, I will heavily be using R, RStudio and/or Python (if needed) for data analysis. A short introduction to R programming and using RStudio will be provided in the lab by your lab instructor. However, feel free to take any online courses or read any books regarding R programming.

1. *An Introduction to Statistical Learning with Applications in R (2nd Edition)*. Gareth James, Daniela Witten, Trevor Hastie and Robert Tibshirani. Springer Texts in Statistics. NewYork (2021).

   E-book is available for download here https://hastie.su.domains/ISLR2/ISLRv2_website.pdf.

2. *The Elements of Statistical Learning (2nd Edition)*. Trevor Hastie, Robert Tibshiani and Jerome Friedman. Springer Series in Statistics. (2009).

   E-book is available for download using https://web.stanford.edu/ hastie/Papers/ESLII.pdf.

3. *Applied Predictive Modeling*. Max Kuhn and Kjell Johnson. Springer, New York. (2013).

   E-book is available through the UofM Library.

4. *Computer Age Statistical Inference: Algorithms, evidence, and data science*. Bradley Efron and Trevor Hastie. Cambridge University Press. (2009).

   E-book is available for download using https://hastie.su.domains/CASI_files/PDF/casi.pdf.

In order to prepare for class, I will normally ask you to read selected topics (mainly from the first textbook above) before coming to each lecture session. I am not expecting you to learn the material on your own, only to familiarize yourself with the main ideas and vocabulary so that the lectures are easier to follow. Do not get bogged down in formulae or minute details. If you come across something that is confusing or troubling, don't despair. If your questions are not resolved during the lecture, please ask. As you work on the problem sets, it will be helpful to re-read the material on a more detailed level.

Topics To Be Covered

Here is the outline of the course material (not necessarily in the same order that I will be teaching in the class), which is subject to change, depending on time and class interests.

1. Introduction
    - Brief overview of statistical learning concepts such as supervised and unsupervised learning with several examples (Regression versus Classification problems, supervised versus unsupervised learning, trade-off between prediction accuracy and model interpretability)
    - Introducing methods for assessing the model accuracy
    - A brief introduction to R programming (in the Lab)

2. Supervised Learning
   - An overview of linear regression: Univariate, multivariate and multiple linear regression.
   - Regression versus K-nearest neighbours.
   - Moving beyond linearity by working with Polynomial regression and regression Splines.
   - Ridge regression, Lasso, regularized regression and some elated topics.
   - Support Vector Machine
   - Resampling Techniques such as the Cross-Validation and Bootstrap.
   - Classification using the logistic regression, LDA, QDA, finite mixture models and Naive Bayes approaches.
   - Tree-based methods, Bagging, Boosting
   - Deep Learning (if time permits)

3. Unsupervised Learning
   - Clustering methods such as K-means clustering, Hierarchical clustering, etc.
   - Understanding dendrograms and different similarity and dissimilarity measures.
   - Missing values and matrix completion (if time permits)

4. Fundamental Concepts
   - Degree of freedom and related topics
   - Model comparison, selection, etc.

Course Technology

Course web-page: Course materials will be made available through the University of Manitoba's UM Learn system (`umanitoba.ca/d2l`).

Software: I will extensively be making use of the R statistical software and RStudio. I might also use Python if needed. R is a free software environment for statistical computing and runs on Windows, Linux, UNIX and Mac. You can download your own copy from R Project (CRAN) homepage at `http://www.r-project.org/`. RStudio can be downloaded from `https://www.rstudio.com/`. Please download and install. A sample R-studio document will be posted on course website.

Python is also freely available and a collection of useful resources for Python beginners, including installation and introductory self-learning resources can be found at `https://www.python.org/ about/gettingstarted/`. You can also use Anaconda Navigator `https://docs.anaconda.com/ anaconda/navigator/` which will give you a desktop graphical user interface (GUI) with access to Jupyter Notebook and R studio.

You can have access to Python and R through syzygy at `https://intro.syzygy.ca/` which gives you direct interactive computing environment to R and Python with Jupyter notebooks at a single access point. You can log into the syzygy service using your UoM account credentials at `https://umanitoba.syzygy.ca/`.
Please download and install.

Other 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. Students should restrict their use of technology to those approved by the instructor and/or University of Manitoba Accessibility Services for *educational purposes only*. Electronic messaging, e-mail, social networking, gaming, etc. should be avoided during class time. Cell phones should be turned off. If a student is on call for emergencies, his/her cell phone should be on vibrate mode and the student should leave the classroom before using it.

Important Dates

These dates are tentative and 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	Information	Date	Information
January 9	Classes Begin	March 22	Last Day for VW
February 20	Louis Riel Day	April 7	Good Friday
February 21–24	Winter Term Break	April 14	**Project Report Deadline**
February 27	**Project Proposal Deadline**	April 12	End of Classes
March 6	**Midterm Test**	April 14 – 28	Final Exams Period

Course Work, Examinations & Grading

Midterm and Final Exams: You will be having ONE midterm test worth 15% of your final grade and a final exam. The tentative date for your term test is **March 6, 2023** from 2:30 pm to 3:45 pm. Test content is defined by the lecture notes. **There will be no make-up test.** If you miss the term test with a valid reason and inform me within 24 hours, the weight of the test will be shifted to the final exam. The final exam covers all course materials and will be 3 hours. The final exam will be worth 25% of your final mark. It will be scheduled by the department. Non-programmable calculators are allowed in the midterm and final. No other electronic devices can be in your possession during the midterm and final exam.

Assignments: Assignments worth 20% of your final grade (There will be 5 assignments each worth 4%). Your Lab instructor will be giving you more information about the due dates, etc. All assignments must be submitted electronically by their due date using **UM Learn Dropbox**. Make sure to follow the assignment submission guideline and note that late assignments will not be accepted.Obviously, exceptions can be made to the above policy if special/exceptional circumstances warrant them (e.g., serious illness). Students are encouraged to discuss and work together on the solutions to the assignments. However, each student must hand in his or her own copy of each assignment with personalized solutions, including comments, discussions and interpretations. Note that actions will be taken against students who are found guilty of acts of academic dishonesty.
Your assignments should conform to the following standards:

- Theoretical part of the assignments are to be done on 8.5×11 paper, scanned and submitted as a high quality PDF file.

- *Name the file you submit with your name and student ID.*

- Applied and simulation parts of each assignment that involve R programming should be accompanied with the R codes and results should be reproducible. I do encourage you to use R-markdown to hand in your R assignments.

- Revise your assignments so they are reasonably free of grammatical and typographical errors.

- Make sure each step in your solutions is well justified: the marker will mark what is written on paper and should not have to guess what you mean.

- Messy or unreadable assignments will be returned with a mark of zero.

Course Project There will be a course project worth 40% of your final grade. This is a very important component of the course and here you should make your hands dirty by working on real data. You should form teams of size at most 3 people for the course project and give a name to your team. Course project can be about any areas of statistical machine learning and the focus of your project should be on both theory and application; you are not required to do research, but pick a topic of interest, read the relevant literature and summarize the results before applying it on real data. The write up for this milestone should tell us what you are planning to do for the project. Your write up should include the project title, the title of your team and team members, and it should include:

1- A good introduction and and overview of the background material, typically covering at least 3 peer-reviewed papers.

2- A description of why the problem you chose is interesting, important and challenging.

3- A clear statement of what you wish to accomplish by the end of the project, and a list of the papers you plan to read.

The proposal should be limited to 2 pages, excluding references. I will provide you with a list of suggested topics, however, you can also suggest yours. For the applied and real-data projects, students can use the data sets from the papers they will end up studying or choose data from any other resources. However, you are strongly encouraged to confirm it with me before starting any significant analysis of your selected data set. **A proposal should be submitted to me by February 27, 2023**. After your plan is approved by myself (with or without revision) then your team can start working on your project and completing the analysis while we are going through the course materials. Final reports (at most 20 pages including all graphs, tables, and references) should be prepared in Rmarkdown and in the PDF format. **The due date for submitting your final report is April 14, 2023**. More details regarding the data project will be submitted on D2L.

Your report should conform to the following standards:

- Be sure that you explain as clearly as possible the connection of your project and the concepts you learned from class.

- Your report should have a motivation and a quick summary of the problem.

- Real data analysis should be accompanied with the R codes and I should be able to get your answers by running your codes. If your R code does not work you will not get any mark. You are highly encouraged to use Rmarkdown to prepare final report.

- Revise your report so they are reasonably free of grammatical and typographical errors. Messy or unreadable project report will be returned with a mark of zero.

- Each report should have a conclusion section that includes comments on the meaning of the results and open questions. Specify the contribution of each team member.

Grading Scheme: The following are the minimum percentage grades required to receive each of the various letter grades: A+ (90%), A (80%), B+ (75%), B (70%), C+ (65%), C (60%), D (50%).

Item	Percent
Midterm Test	15%
Assignments	20%
Final Exam	25%
Course Project	40%
Total	100%

Class Communications

Using Copyrighted Material

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of these materials is strictly forbidden without their consent. For more information, see the University's Copyright Office website at http://umanitoba.ca/copyright/orcontactum_copyright@ umanitoba.ca.

Recording Class Lectures

Mohammad Jafari Jozani 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 of Mohammad Jafari Jozani**. Course materials (both paper and digital) are for the participant private study and research. If class recordings are provided by the instructor those are meant to be for your own personal use only. **It is not permitted to copy or distribute any course material and recordings, etc.**

Respectful Behaviour and Use of Electronics in the Classroom

It is expected that you conduct yourself professionally and do not distract your fellow students with unnecessary or inappropriate chat messages, sounds, or images while in the classroom. It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. A student may use technology in the classroom setting only for educational purposes approved by the instructor and/or the University of Manitoba Accessibility Services. Students should not engage in electronic messaging/posting activities (e-mail, texting, video or voice chat, social networking (e.g. Facebook) or electronic gaming during scheduled class time.

Student Accessibility Services

If you are a student with a disability, please contact Student Accessibility Services (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

Academic Integrity

It is important that you understand what constitutes academic dishonesty and that you are familiar with the very serious consequences. Links to resources that describe academic dishonesty (including plagiarism, cheating, inappropriate collaboration and examination impersonation, as well as typical penalties) can be found at:

```
http://umanitoba.ca/faculties/science/undergrad/resources/webdisciplinedocuments.html
or
http://umanitoba.ca/faculties/science/undergrad/resources/webdisciplinedocuments.html
```

ROASS Schedule A

Schedule "A" of the *Responsibilities of Academic Staff with regards to Students (ROASS)* policies of the University of Manitoba lists resources and policies for students. It is important that you familiarize yourself with these resources and policies. This document will be posted to the Department of Statistics web page and to the UM Learn system.

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http://umanitoba.ca/science/statistics/files/pages/2016/09/Schedule-A-ROASS-Statistics.pdf
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Extra information

Please find some important information (Appendix for Course Syllabi) from the Faculty of Science in the following pages. In case, any link is missing, a separate pdf file is also posted in UM Learn. Some information may be repeated from the above.

Appendix For Winter 2023 Course Syllabi

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/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 – Academic advising.

#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. Lectures are delivered in-person this fall term therefore students 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/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 (UML)

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' web site.

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 [Winnipeg Rental Network](#)
    - o [Manitoba Residential Tenancies Branch](#)
    - o [HOPE End Homelessness Winnipeg Services & Supports](#)
- *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 [Klinic 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 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 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 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 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)

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

HEALTH AND SAFETY
The UM is committed to maintaining a safe learning environment for all students, faculty, and staff. Should campus operations change because of health concerns related to the COVID-19 pandemic or other campus-wide emergency, it is possible that this course will move to a fully remote delivery format. Should the instructor be required to stay at home for an extended period and an alternate instructor not be available, the course may move temporarily to a remote delivery format.

Mask Wearing
In a face-to-face environment, our commitment to safety requires students to observe all Covid guidelines set by the University (https://umanitoba.ca/coronavirus) While on campus and in class, you must wear masks as stipulated in current University policies, procedures, and guidelines. The University highly recommends the use of KN-95 masks; the minimum requirement is a ATSM Level 2 Medical mask. Both mask types are available at many locations on campus. Students who fail to comply are subject to disciplinary action in accordance with the Student Discipline Bylaw and the Non-Academic Misconduct and Concerning Behaviour Procedure.

Instructors are told to follow the protocols specified in COVID-19 information for staff, faculty, and researchers for non-compliance with masking. Students should not eat or drink during class time.

Illness
Remember: STAY HOME IF YOU HAVE SYMPTOMS OR ARE ILL. If you become ill, we highly recommend that you self-isolate; you should notify your instructor by email so you can develop a plan to complete the course learning outcomes while you are absent.

What to do if you become ill while at UM:
1. Leave the classroom, lab, or workspace immediately. Continue to wear your mask while leaving the premises and/or while waiting for transportation.
2. Perform hand hygiene (soap and water or hand sanitizer) and avoid contact with others and minimize contact with the physical environment.
3. Once at home, complete the MB self-assessment and follow the directions that are provided.
4. Inform your instructor(s) or, if in residence, the appropriate individual. The Instructor will discuss with you arrangements for extensions, deferrals or make-up assignments as required.
5. Please remain off-campus and all UM facilities until cleared to return in accordance with self-assessment, testing results, and UM recommended isolation procedures.
Recommended transportation options (in order):
      1. Drive yourself home.
      2. Pick-up by family or friend – remember to keep your mask on and to distance yourself as much as possible, and where possible, open a window to improve ventilation.
      3. Pickup by taxi/Uber:
            Remain masked and perform hand hygiene before entering the vehicle.
                o Avoid touching the inside of the vehicle
                o Keep your mask on for the duration of the ride
                o Where possible, open a window to improve ventilation.

4. Winnipeg Transit buses – We recommend that you do not use Winnipeg Transit in this situation.

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 this form 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)
As we emerge from the pandemic, the University still has the health and safety of its community at top of mind. Since your classes are held in-person, please make sure you follow the University's COVID-19

[Health and Safety Protocols](#). Notably, exercise [good hand hygiene](#), [stay home if you are ill](#) and you must wear a [mask](#) when attending lecture/labs and on campus.

- Students who miss a lab or assessment due to an extenuating brief or temporary absence should complete a [self-declaration for brief and temporary student absences 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

Students who have conflicting scheduled exams should contact their faculty's academic advisors as soon as possible. Students who miss their exam due to extenuating circumstances can apply for a deferred exam. Please note that the granting of a deferred exam is not necessarily guaranteed.

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, 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.

Students have the opportunity to voluntarily withdraw (VW) from this class up to March 22 ([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. 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 will be electronically monitoring 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 dishonesty is available on the [Faculty of Science website](#).

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, see the University's Copyright Office website at http://umanitoba.ca/copyright.

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. 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, 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** 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 **YOUR** registered 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/
520 University Centre
204 474 7423
student_advocacy@umanitoba.ca