

ABIZ 3530: Farm Management

Syllabus

Instructor

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Office Hours

By appointment

Course Description

A general description of the course is as follows:

- A series of learning units explore farm management concepts and applications. Each unit provides exercises for student applications of the concepts. Microsoft Excel is used throughout as well as Python coding. Each student will complete fully-working Python code to solve a farm management problem of the student's choosing.

Learning Outcomes

Upon completion of this course students who apply themselves to learning will be able to:

- Understand and explain fundamental farm management concepts (e.g. efficiency in logistics, efficiency in feed rations, automation with streaming temperature and humidity data, optimization with irrigation, analysis of marketing data using pivot tables in Excel and Python, analyzing risk and return and rebalancing an investment portfolio);
- Apply agribusiness management concepts to solve farm management problems using Microsoft Excel and Python coding (e.g. efficiency in logistics, efficiency in feed rations, automation with streaming temperature and humidity data, optimization with irrigation, analysis of marketing data using pivot tables in Excel and Python);

- Apply the above to complete fully-working Python code to solve a farm management problem of the student's choosing.

Course Materials

Required Textbook

Grant, Charles W. (*Amped Up*) *Farm Management*, ISBN 9780100021860, © 2020 CW Grant and Company Limited

The textbook for this course is an e-textbook and is available for purchase from the University of Manitoba Bookstore. You will need to purchase a code to get admittance to the book. To get your code you can go the University of Manitoba Bookstore and purchase a code at the service desk or you can phone the University of Manitoba Bookstore at (204) 474-8321 or toll free at 1-800-310-3331 and a customer service person will talk you through the order. Or you can do the online order yourself by starting at the link

<https://umanitoba.ca/campus/bookstore/shoponline.html> It you do it online yourself opt for the "pick up in store" option rather than "delivery". Your code will be emailed to you.

Your code for the e-textbook will be emailed to you. You then go to <https://ampedupagribusiness.ca> and sign up for the e-textbook. An email will come to you inviting you to submit your purchased code. Allow 24 hours for receipt of the returned email. Upon receipt of your returned email with your code you will be admitted to the e-textbook.

Required Technology

The technology required for the course is a computer, Microsoft Office software, Python software (open source), PyCharm IDE (free for students) and an Internet connection. Microsoft Office 365 is available to you as part of your registration as a student at the University of Manitoba.

Course Overview

ABIZ 3530 is a series of ten learning units explore farm management concepts and applications. Each unit provides exercises for student applications of the concepts. Microsoft Excel is used throughout as well as Python coding. Each student will complete fully-working Python code to solve a farm management problem of the student's choosing. Four

assignments are to be completed as well as the final exam.

Topics

- Ch.1 Getting Started – Python installation and an automation application
- Ch2. Logistics – Microsoft Excel and Python coding applied to a farm logistics problem
- Ch3. Python Coding 1 – Integer, Variable, String, Dictionary
- Ch.4 Feed Efficiency – Microsoft Excel and Python coding applied to a feed efficiency problem
- Ch5. Big Data – Python coding (Pandas library) applied to streaming greenhouse temperature and humidity data
- Ch6. Python Coding 2 – Boolean, Tuple, Set, Comparison Operators, For Loops
- Ch7. Pivot Table – Microsoft Excel function applied to analysis of market timing
- Ch8. Irrigation – Microsoft Excel and Python coding applied to irrigation timing decisions
- Ch9. Portfolio – Python coding applied to analyzing a portfolio of investments
- Ch10. Python Coding 3 – For Loop, While Loop, Break Loop, Matplotlib

Learning activities

To learn the materials presented in this course students should read the e-textbook chapters that correspond with the learning units and complete the exercises as assigned. They should practice the Microsoft Excel and Python coding application. Students should then review in detail all of the material from the ten units to prepare for the final examination. Material from all chapters will be tested on the final examination. The material will also provide the foundation for the fully-working Python code that they will complete to solve a farm management problem of the student's choosing.

Evaluation and Grading

Grading for ABIZ 3530 includes evaluation of four submitted assignments and a final examination. Late assignments are docked 10% per day with a two-hour grace period on the first day.

Distribution of Marks

Assignment 1–Chapters 1-3	10%	(In-chapter questions and solutions)
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Assignment 2–Chapters 4-6	10%	submitted to UM Learn) (In-chapter questions and solutions submitted to UM Learn)
Assignment 3–Chapters 7-10	10%	(In-chapter questions and solutions submitted to UM Learn)
Assignment 4–Python code	20%	(working Python code submitted to UM Learn)
Final Examination	50%	
Total	100%	

Grade Assignment

Percentage out of 100	Letter Grade
95-100	A+
86-94	A
80-85	B+
72-79	B
65-71	C+
60-64	C
50-59	D
Below 50	F

Assignment Submission

Assignments are to be submitted to UM Learn. The various parts of the assignments are to be bound up in a single PDF file for each assignment for submission. Multiple files will not be graded so be sure to bind up all of the relevant files for each assignment into a single PDF file.

Assignments are to show a screen shot of answers to the in-chapter questions for each chapter followed by screen shots of the answers to the questions for each unit listed at the end of each chapter.

Assignment Due Dates

Assignment 1–Chapters 1 -3	Due Fri Oct 7 2022 at 11:59 PM
Assignment 2–Chapters 4-6	Due Fri Oct 28 2022 at 11:59 PM
Assignment 3–Chapters 7-10	Due Fri Nov 18 2022 at 11:59 PM
Assignment 4–Python Code	Due Fri Dec 9 2022 at 11:59 PM
Final Examination	To be scheduled by Registrar’s Office

Penalty of late submission of assignments is 10% per day late with a two-hour grace period on the first day.

Examination

The Registrar's Office is responsible for the [final exam schedule](#) which is available approximately one month after the start of the course. The final exam will test your knowledge on all twelve topics covered in the course.

UM Policies

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

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

Academic Calendar

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

Academic Integrity

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

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

Copyright

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

Grade Appeals

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

Intellectual Property

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

Program-Specific Regulations

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

Respectful Work and Learning Environment

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

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

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

Sexual Violence Policies

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

Voluntary Withdrawal

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

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

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

UM Learner Supports

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

Academic Advising

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

Academic Learning Centre (ALC)

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

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

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

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

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

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

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

Basic Needs

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

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

- *Finances*
 - [UM Financial Aid and Awards](https://umanitoba.ca/financial-aid-and-awards) (https://umanitoba.ca/financial-aid-and-awards)
 - [Manitoba Student Aid](https://www.edu.gov.mb.ca/msa/) (https://www.edu.gov.mb.ca/msa/)
- *Child Care*
 - [UM Child Care](https://umanitoba.ca/about-um/child-care) (https://umanitoba.ca/about-um/child-care)
 - [Manitoba Child Care Subsidy](https://bit.ly/3yG3ijy) (https://bit.ly/3yG3ijy)
 - [Manitoba Child Care Association](https://mcca-house.org/looking-for-child-care/) (https://mcca-house.org/looking-for-child-care/)

English Language Centre

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

Health and Wellness

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

Winnipeg Urgent Physical and Mental Health Care

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

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

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

Student Counselling Centre (SCC)

The [Student Counselling Centre](https://umanitoba.ca/student-supports/student-) (https://umanitoba.ca/student-supports/student-

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

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

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

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

Health and Wellness Office

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

Spiritual Care and Multifaith Centre

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

Student Support Case Management (SSCM)

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

University Health Service (UHS)

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

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

Student Services at Bannatyne Campus

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

Indigenous Students

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

International Students

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

Sexual Violence Support and Education

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

The [Sexual Violence Resource Centre](https://umanitoba.ca/sexual-violence) (https://umanitoba.ca/sexual-violence), located at 537 UMSU University Centre (Fort Garry campus) provides support, resources,

information and referral services for any student, faculty or staff member who has been affected by sexual violence.

Student Accessibility Services (SAS)

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

Student Advocacy

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

University of Manitoba Libraries (UML)

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

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

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