

Econ 2030 A01: Mathematical Economics 1
Winter 2019
T/R 2:30 – 3:45 pm; 240 University College

Prof. Troutt
550 Fletcher Argue, 474-6325
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Office hours and appointments (You do not need an appointment to attend office hours.)

TA office hours	course outline will be updated once known	
R 11:00 am - noon	Prof. Troutt	550 Fletcher Argue

To request an appointment, email Prof. Troutt. Your message should satisfy the requirements on page 5 and include all the dates and time ranges that you are available for the next full week. I will look for the earliest match between our schedules and assign you an appointment slot.

Course overview

- This course is intended to familiarize you with the foundational mathematical tools economists use to examine economic relationships. If you plan to pursue graduate studies in Economics, you should take Econ 3030 after completing Econ 2030.
- This course will move quickly, with students responsible for practicing and mastering a large amount of material independently outside of class. Learning mathematical economics requires regular and frequent study and practice. You should plan to spend at least 30 minutes on this course every day outside of class.
 - Read assigned material prior to class sessions.
 - Participate in class by attempting the examples and asking questions.
 - Plan to learn, study, and practice the material for this course every day. This will include re-working the example questions presented in class. In class, I will skip steps. You should work through the steps outside of class time.
 - If your math skills are rusty or weak, plan to spend extra time on this course.

Required text, readings, and materials

1. **Required course bundle:** available for purchase at the UM Bookstore; it is called Econ 2030 Mathematical Economics 1 Bundle; contains required readings and essential notes that you should bring to all class sessions.
2. **Required textbook:** Dowling, Edward T. 2012. *Introduction to Mathematical Economics, Third Edition*. (Schaum's outline series.) New York: McGraw-Hill. You will use this text as an additional source of practice problems.

Evaluation

Assignments	3 assignments; see notes 1 & 5	18% (6% each)
Test 1	in class T Feb. 12; see notes 2, 3 & 5	31%
Test 2	in class T March 12; see notes 2, 3 & 5	31%
Test 3	in class T April 9; see notes 2, 3 & 5	20%

Notes about evaluation

1. **Assignments:** Assignments with detailed instructions will be posted in UML well before their due dates. You should work on assignments regularly, not just right before they are due.
2. **Tests:** Tests will be 65-70 minutes long. They will be challenging to complete within the allotted time. They may include computational, brief verbal answer, graphical, and/or analytical questions. The *tentative* coverage for each test is listed on p. 4; I will announce finalized coverage at least one week before each test date. All tests may be cumulative. No washroom breaks will be allowed during tests.
3. **Calculator:** You need a simple calculator for tests. It must: be stand-alone; not possess any programmable or graphing capabilities; not be able to solve for or check solutions to systems of equations, mathematical models, etc. You must not use your calculator to perform any mathematical techniques covered in the course (e.g., calculating the determinant of a matrix, taking a derivative, solving for roots, etc.).
4. **Your own supplies:** You will not be allowed to share or borrow any materials or supplies during tests regardless of any issues that arise with respect to your materials and supplies.
5. **Make-up policies:**
 - a) **Assignments:** Because assignments will be provided well in advance of their due dates and I expect you to work on them regularly, there will be no extensions or make-ups for assignments for any reason. Assignments will be accepted for 48 hours after their due date (25% penalty/24 hours, non-prorated). After that, missing assignments will be awarded a grade of 0. Plan to work regularly on assignments so that a last-minute illness or other life event does not cause you to receive a 0 on an assignment.
 - b) **Tests:** If you miss a test for a valid medical or compassionate reason, you must provide me with verifiable written documentation and make arrangements to write your make-up test within 5 calendar days following the missed test. If you do not give me your written documentation *and* make arrangements to make up your missed test within five calendar days following the missed test, you will receive a grade of 0 for that test.
6. **Grading scale:** A+ ($\geq 93\%$); A (86-92%); B+ (79-85%); B (72-78%); C+ (65-71%); C (58-64%); D (51-57%); F ($\leq 50\%$). You will know your grades for assignment 1 and test 1 by the voluntary withdrawal deadline (March 20). You may or may not know your grades for assignment 2 and test 2 by the VW deadline. Course grades are subject to departmental review.
7. **Grade appeals:** Informal or formal appeals of term work must be submitted within 10 days of receiving marks. I will not consider late requests.
8. **Unclaimed work:** Unclaimed term work will be held for four months from the end of the final examination period for the term in which the work was assigned, then destroyed according to FIPPA guidelines.

Washroom break policy during tests

Students will not be permitted to leave the classroom during a test unless they have submitted their test for marking. If you have a condition that requires you to access the washroom during term tests, please register with Student Accessibility Services immediately.

Technology use in the classroom

Calculators: You should have a simple calculator for this course. It should not have graphing or programmable features, and it should not be in any way capable of checking for solutions to math models, systems of equations, or other types of work we will do in this course. Being in possession of a calculator that has any such features at a test for this course will be grounds for an academic dishonesty investigation.

Cell phones: Cell phones should be off/silenced and out of sight during class. This should not even need to be stated. If your cell phone is visible during class time, I may confiscate it until the end of the class session. If you have special circumstances that may require you to use your phone, you should speak to me privately right away. For in-class practice requiring calculations, you must use your calculator and not your phone or other device.

Laptops and tablets (etc.): Laptops and electronic tablets (etc.) should not be out during class. If you want to use a computer or tablet (etc.) for notetaking purposes, you must see me in person in my office (during office hours or by appointment) before being allowed to do so. At our meeting, I will ask you to sign an agreement committing you to sit in the front two rows of the classroom when using your laptop or tablet (etc.) and allowing me to randomly ask you to turn your screen around without touching the keyboard or other parts of the device. Once you have signed the agreement, then you must sit in the front two rows of the classroom at any sessions at which you wish to use your laptop or tablet (etc.). I may at any time ask you to turn your screen around to see what you are doing. If I detect that you were using the device for purposes unrelated to taking notes for this course, then your permission to use a laptop or tablet (etc.) during class will be considered revoked. If you have not signed an agreement granting you permission to have your laptop or tablet (etc.) out during class time and I see you using it, I am likely to confiscate it for the duration of the class session.

Academic integrity

- Be sure to acquaint yourself with UM policies on academic integrity, including plagiarism, cheating, and exam personation. These are covered in the University's on-line Calendar at: <http://crscalprod1.cc.umanitoba.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=320&chapterid=3995&topicgroupid=21576> .
- Ignorance of the rules and policies about academic integrity is not accepted as a valid excuse for violating them.
- The *minimum* penalty in Arts for academic dishonesty in a test or final examination is F for the test/exam and F-DISC in the course plus a suspension from the Faculty of Arts for a period of 1 year. The F grade and disciplinary note appear on the student's transcript. For repeat violations, the penalty may include suspension from the Faculty of Arts for a period of up to five years.

Accessibility Services

Students with disabilities or other conditions that could affect scholastic performance are entitled to accommodation through Accessibility Services. If you believe that you qualify for accommodations, go to 520 University Centre to inquire about registering for their services. This includes if you are unable to sit through a full class session for the purposes of writing a term test. If you are already registered with Accessibility Services, please feel free to consult with me privately regarding your accommodations with respect to this course.

Important dates

- R Feb. 7 Assignment 1 due (11:59 pm)
- T Feb. 12 Test 1 (tentatively covers C&W Ch. 2, Hoy Ch. 2, C&W Ch. 3)
- Feb. 17 5:00 pm Deadline for arranging make-up Test 1 (w/ documentation provided)
- Feb. 18-22 Winter break week
- R Mar. 7 Assignment 2 due (11:59 pm)
- T Mar. 12 Test 2 (tentatively covers C&W Chs. 4, 5, 6, and part of ch. 7)
- Mar. 17 5:00 pm Deadline for arranging make-up Test 2 (w/ documentation provided)
- W Mar. 20 VW deadline
- R April 4 Assignment 3 due (11:59 pm)
- T April 9 Test 3 (tentatively covers C&W Chs. 7, 9, & 11)
- April 14 5:00 pm Deadline for arranging make-up Test 2 (w/ documentation provided)

Some important information

- To maintain a classroom setting that is conducive to learning, I expect students to conduct themselves respectfully. This includes turning off cell phones, computers, and tablets (etc.) and putting them away. If you engage in actions that are disruptive to me or to any classmates, I may confiscate your device or ask you to leave the classroom for the duration of the class session.
- You must obtain my written permission prior to recording (audio or video) any aspect of class sessions with any kind of device. *This includes photographing projected images during class, which you shouldn't do anyway because your devices should be put away.*
- I will not schedule appointments or extend scheduled office hours within two weekdays before tests or assignment due dates. Likewise, I may not reply to content questions posted to the discussion forum two weekdays or less before a test or assignment due date. You are responsible for managing your time, working on course material regularly throughout the term, and attending office hours, asking questions in class, and/or posting questions in the discussion forums on a regular basis throughout the term. Do not count on getting to see me at the last office hours prior to a test or assignment due date. Seek help as soon as you have a question or confusion.

Asking questions electronically

- **Discussion forums:** You should post any questions about administrative matters or course content in the appropriate discussion forum within the UMLearn site. Anyone can post in the forums, and anyone can respond to forum posts.
 - Post questions about course content in the “Content questions” forum (example: Could someone please explain how we got transition matrix A in class on Thursday?).
 - Post questions about administrative matters or course logistics in the “Administrative questions” forum (example: Will chapter 9 be covered on the test?).
- **Emailing:** You should only email me about matters that are personal/private or that are not relevant to the whole class (e.g., to request an appointment; if you missed a test; etc.). Before sending your email message, please ensure it satisfies the following requirements, or I may not reply.
 1. Sent from your University of Manitoba account. This is mandatory.
 2. Includes “2030” or “Econ 2030” in the subject field.
 3. Is written in a professional manner. This means starting with a salutation (example: Dear Prof. Troutt,); writing out words and spelling them conventionally (no text-type abbreviations); using a formal tone, as you would use with an employer; ending with your name and student number (example: Sincerely, Susan Lee UM #####).
- I will check student email and course discussion forums once per weekday, usually before 10:00 am. I will not check these on weekends. I will reply to email and discussion forum posts within 2 business days, aiming for one business day. Please do not send or post a follow-up until: (1) you have verified that your message or post complied with the necessary requirements stated above, and (2) you have allowed two full business days to pass since sending or posting your initial inquiry.

Some additional important information

a. Academic supports

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.

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> or name: <http://bit.ly/1tJ0bB4>. 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 following: <http://bit.ly/1sXe6RA>. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries' homepage: www.umanitoba.ca/libraries.

b. Mental health supports

For 24/7 mental health support, contact the Mobile Crisis Service at 204-940-1781.

Student Counselling Centre

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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 <http://umanitoba.ca/student/health-wellness/welcome.html>
Katie.Kutryk@umanitoba.ca
469 University Centre
(204) 295-9032

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>

c. Copyright requirements

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.

d. Institutional policies, procedures, and supplemental on-line information

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 and,

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 http://umanitoba.ca/admin/governance/media/Intellectual_Property_Policy_-_2013_10_01.pdf

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/>

520 University Centre

204 474 7423

student_advocacy@umanitoba.ca