MATH*1030

Business Mathematics

Winter 2023

UNIVERSITY of GUELPH

1 INSTRUCTIONAL SUPPORT

1.1 Instructor

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2 COURSE DESCRIPTION

2.1 Calendar Description

Primarily intended for business and economics students, this course is designed to introduce and reinforce the essential mathematical skills needed to understand, analyze, and solve mathematical problems related to business and economics. Topics covered include basic algebra; functions, including a review of exponential and logarithmic functions; sequences and series with financial applications; limits; continuity; and differential calculus including derivatives, higher order derivatives, and curve sketching.

Credit Weight: 0.5   **Department:** Mathematics & Statistics   **Campus:** Guelph

2.2 Learning Objectives

Upon successful completion of this course, students will have demonstrated the ability to:

1. Demonstrate understanding of pre-Calculus including basic algebra.
2. Demonstrate a thorough grounding of elementary functions.
3. Demonstrate the ability to sketch and interpret a wide variety of graphs.
4. Demonstrate understanding of elementary Differential Calculus.
5. Demonstrate how to apply mathematics to some simple financial problems.

2.3 Important Dates

First day of lecture: Monday, Jan 9 2023
Winter Break: Monday, Feb 20 to Friday, Feb 25 2023. (No classes)
Holiday: Friday April 7, 2023 (No classes)
Last day of classes: Monday April 10 2023.
Drop Deadline: Courses that are one semester long must be dropped by the last day of class

(see also https://calendar.uoguelph.ca/undergraduate-calendar/schedule-dates/winter-semester/)

Course Feedback Information: Near the end of the term, you will be given the opportunity to evaluate your instructor and provide comments regarding your experience. Your instructor will inform you of when these are to take place.

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3 LEARNING RESOURCES

3.1 Course Website

Course material, news, announcements, and grades will be regularly posted to the MATH*1030 Courselink website. ***You are responsible for keeping up-to-date on this site.***

3.2 Textbooks and Resources

The main resource is the fillable MATH*1030 lecture notes. Students must buy the 'fillable' lecture notes for this course at the University Bookstore (cost about $35). You can either order the Workbook from the bookstore website (sent in a couple of days) or go to the bookstore and buy it in person. (No other textbook required).

There are many auxiliary books you can consult for background reading. For example:
- Calculus with Applications (9th Edit), M. Lial, R.N. Greenwell, N.P. Ritchey. Pearson/Addison Wesley, 2008.
- Concepts of Calculus with Applications, M. Goshaw. Pearson/Addison Wesley, 2008. • Calculus (7th Edit), J. Stewart. Brooks Cole, 2012.
- Contemporary Business Mathematics with Canadian Applications (10 Edit), S.A. Hummelbrunner, K. Halliday, K.S. Coombs. Pearson, 2015.

Other notes and other resources will be posted on the Courselink website.

3.3 Lecture Information

Section 1 MATH*1030*01 M/W/F 2:30 PM - 3:20 PM in THRN 1200
Section 2 MATH*1030*02 M/W/F 4:30 PM - 5:20 PM in MACN 105

Note that due to the COVID-19 pandemic, lectures may be rescheduled to online. Instead of the in person lecture time, synchronous classes will meet over Zoom during the lecture time. The Zoom link for the lecture will be accessible from Courselink. Please check the Courselink website to make sure you know where lectures are happening.

3.4   Math Learning Center

The Mathematics & Statistics Department operates a drop-in learning center where you'll find a team of tutors that can help you understand and solve problems in MATH*1030. The learning center is located on the third floor of the McLaughlin Library in the Science Commons. The hours of operation are as follows:

Monday	Tuesday	Wednesday	Thursday	Friday
9:30am-3:30pm	10:00am-4:00pm	9:30am-4:30pm	10:00am-4:00pm	9:30am-2:30pm

See https://mathstat.uoguelph.ca/tutoring

3.5   Mathmatize, Campuswire and karma bonus points

In lectures, we will be using the Mathmatize platform for student participation. Outside of lecture, we will be using the Campuswire platform to help facilitate student questions and student discussion during the term. You are highly encouraged to post questions to Campuswire and to help answer other students questions. Good questions will not just state a problem, but will include what you have tried so far and clarification on what exactly it is you don't understand. Good answers will not just provide the final answer but will explain *why* with a well justified solution.

By being an active participant on the Campuswire formus, you can earn bonus points. The instructors and TAs will identify good questions and good answers on Campuswire during the term. You can earn up to 5 Karma bonus points during the term for your participation on Campuswire by posting good questions and/or answers and/or meaningfully participating in student discussions.

Karma points increase your course grade by the following prescription: if you earned n Karma points, then those points are yours and the regular grading scheme will apply to the remaining

(100 – n) of your course grade. (Example: If you earned 10 Karma points, and got 80% on the rest of the course, then your final grade is 10+(100-10)80% =82)

3.6   Communication & Email Policy

Please use office hours and Campuswire discussion forums as your main opportunity to ask math content questions about the course. Email is to be used for logistical purposes and math questions are not generally answered by email. **Please include MATH1030 in the subject line of any emails.** Major announcements will be posted to the course Courselink website. **It is your responsibility to check the course website regularly.** As per university regulations, all students are also required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

3.7   Online Behaviour

Inappropriate online behaviour will not be tolerated. Examples of inappropriate behavior include:

• Posting inflammatory messages about your instructor or fellow students or any other topic

• Using obscene or offensive language online

• Copying or presenting someone else's work as your own

• Adapting information from the Internet without using proper citations or references

• Buying or selling term papers or assignments

• Posting or selling course materials to any website

• Having someone else complete your homework or completing homework for another student

• Making false claims about assignment submissions or other course content

• Threatening or harassing a student or instructor online

• Discriminating against fellow students, instructors or TAs

• Using the course website to promote profit-driven products or services

• Attempting to compromise the security or functionality of the learning management system

• Sharing your user name and password

• Recording lectures without the permission of the instructor

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4   ASSESSMENT

4.1   MathMatize Polls

MathMatize polls will be conducted in class during lecture. You receive credit for all MathMatize questions you participate in during lecture; in some questions you will get full credit for simply participating, and in other questions you will get partial credit for participating with full credit granted for also getting the correct answer.

To account for technical problems and other valid reasons you might miss a class, we will allow you to miss up to 20% of all MathMatize questions and still get a perfect MathMatize poll grade. The 20% of questions you score the lowest on will be dropped, and only your top 80% of questions will be counted towards your final grade.

4.2   High School Algebra Quiz

Within the first 3 weeks of classes students must take a quiz covering high-school algebra. The quiz is based on a high-school algebra review, posted in the Contents section of Courselink. Students should work through the review as soon as possible to prepare for the quiz. Students should also work through the Chapter 2 material in the lecture notes. The completed notes for Chapter 2 are posted in the Contents section of Courselink. The high school algebra quiz is due on Courselink before Monday January 30 at 11:59pm.

4.3   MathMatize Homework

There will be homework assignments posted each week on the MathMatize platform for you to complete. The content of this homework will be material covered in the previous week of classes. You have unlimited attempted to do the problems until their assigned due date. Your grade for each homework assignment will be the highest grade received from all attempts you have taken before the due date. You do not need to submit your written work for these assignments. MathMatize homework for the week will be due every Monday at 11:59pm.

4.4   Midterms and Final Exams

There will be two in person midterms and an in person final exam for the course. Missed midterms will receive a grade of 0% unless academic consideration is granted, in which case the weight of the missed midterm will be added to the weight of the final exam. There will be no makeup tests.

All students in the course write the exams at the same time regardless of which section you are enrolled in. Details about what are you allowed to bring to the midterms and final exam will be posted on the courselink website. (NOTE: The midterm *times* are updated as of Jan 10 2023)

- Midterm #1: Saturday February 11, 2023 4:00pm-6:00pm in ROZH 104
- Midterm #2: Saturday March 25, 2023   4:00pm-6:00pm in ROZH 104
- Final Exam: Wednesday April 19, 2023 11:30am-1:30pm location TBA

4.5   Grade Distribution

	Grading Scheme A	Grading Scheme B
MathMatize Polls	5%	0%
High School Algebra Quiz	10%	10%
MathMatize Homework	15%	15%
Midterms (x2)	40%	40%
Final Exam	30%	35%

The higher of Grading Scheme A and Grading Scheme B will determine your final grade.

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5 MENTAL HEALTH SERVICES

One out of every five students in Canada experiences some sort of mental health issue at some point in their academic career. If you find yourself facing a mental health crisis, or just need to talk to someone, please consider taking advantage of one of the following resources available to University of Guelph students:

Counselling Services: Visit the Counselling Services website (https://wellness.uoguelph.ca/counselling) to get information on resources available to you, both online and in-person. You can also visit them at Health Services (J.T. Powell Building, ext 53244) where they offer individual and group counselling sessions by appointment or walk-in.

Student Support Network: is located in the Wellness & Education Promotion Centre in the J.T. Powell Building and offers confidential, peer-based, drop-in support.

Good2Talk: (1-866-925-5454) is a free, 24/7 student hotline that provides professional counselling and referrals for mental health, addictions and well-being.

Here 24/7: (1-844-437-3247) specializes in assessment, referral and appointment booking and is available 24/7 for crisis support.

You are not alone and you will not be judged for asking for help.

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6 STANDARD STATEMENTS

Standard math department policies about "Email Communication", "When You Cannot Meet a Couse Requirement", "Drop Date", "Copies of Out-of-Class Assignments", "Accessibility", "Academic Misconduct", "Recording of Materials", "COVID-19 Disclaimer", "Illness" and "COVID-19 Safety Protocols" apply to this course. These policies can be found at https://mathstat.uoguelph.ca/node/534