

MATH*1030 - Business Mathematics

Winter 2024

Course Outline

Course Label

Prerequisite: 4U Advanced Functions

Restrictions: MATH*1080, MATH*1200.

(Not available to students registered in the BSC program).

Credit Weight: 0.50

Academic Department: Mathematics & Statistics

Campus: Guelph

Semester Offering: Winter.

Course Description

This course is primarily intended for business and economics students. The course is designed to introduce and reinforce the essential mathematical skills needed to understand, analyze, and solve business-related mathematical problems. 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.

Learning Outcomes

- Mastering pre-Calculus including basic algebra.
- Demonstrate a thorough grounding of elementary functions.
- Ability to sketch and interpret a wide variety of graphs.
- Demonstrate understanding of elementary Differential Calculus.
- Demonstrate how to apply mathematics to some simple financial problems.

Course Tools

1. **Course Notes:**

Students must buy the 'fillable' lecture notes by Professor Marcus Garvie 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 textbook required).

2. **What to bring to class:**

- The fillable lecture notes that you bought at the University Bookstore.

- Blank paper, pens/pencils.
- Scientific calculator, graphing calculator (optional, but recommended).

3. Extra (optional) texts for background reading:

There are many 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.
- Also, see the links in the Workbook to four open-access textbooks in Calculus and Pre-Algebra.

Meeting Times

Lectures

Class	Day	Time	Location
Section 01	M/W/F	10:30-11:20am	RICH 2520
Section 02	M/W/F	1:30-2:20pm	ROZH 103

Instruction

Instructor

Name	Office	Email
Ali Mahmoud (math)	MacNaughton 524	amahmo18@uoguelph.ca

Teaching Assistants

Section 01	Grace D'Agostino	gdagosti@uoguelph.ca
	Benjamin Benteke	bbenteke@uoguelph.ca
	Emma Bottomley	bottomle@uoguelph.ca
	Matthew Kreitzer	mkreitze@uoguelph.ca

Section 02	Tonima Datta Chaity	tchaity@uoguelph.ca
	Thomas Seeger	seeger@uoguelph.ca
	Mukesh Taank	mtaank@uoguelph.ca
	Hewage Wijerathna (Sasangani)	hwijerat@uoguelph.ca

Assessments

Assessment	Weight
Weekly Quizzes	40 %
Midterm	20 %
Final Exam (Dec. 5)	40 %

Weekly Quizzes

These quizzes are:

- every Monday,
- during lecture time,
- for 30 min,
- proctored by the 4 TAs assigned for the section,
- total of 10 quizzes,
- each graded out of 10 marks,
- each consists of 2 questions,
- It is your responsibility to scan and submit properly to GradeScope in the time intervals [11:00-11:10] if you are section 01, or the interval [2:00-2:10] if you are section 02. Any late submissions will not be accepted. If you require any help or assistance in the uploading process, one of the TA's will help you.

Midterm

Wednesday, February 14, Lecture time. More details will be posted on Courselink.

Final Examination

The final examination will be held on **Tuesday, April 16, 8:30am-10:30am**. The exam will cover the entire course.

Course Schedule for Lectures and Assessments by Week

Week		Chapters	Math Topics	Assessments
1	Jan 8	Chapter 1	Sets and Preliminaries	
2	Jan 15	Chapter 2	Algebra Review	Quiz 1
3	Jan 22	Chapter 3	Some Trigonometry	Quiz 2
4	Jan 29	Chapter 4	Coordinates	Quiz 3
5	Feb 5	Chapter 5	Functions	Quiz 4
6	Feb 12	Chapter 6	Functions	Quiz 5
7	Feb 19		Winter Break	
8	Feb 26	Chapter 7	Famous Functions	Quiz 6
9	Mar 4	Chapter 8	Sequences and Series	Quiz 7
10	Mar 11	Chapter 9	Some Business Applications	Quiz 8
11	Mar 18	Chapter 10	Limits and Continuity	Quiz 9
12	Mar 25	Chapter 11	Differential Calculus	Quiz 10
13	Apr 1	Chapter 12	Graphs and the Derivative	
14	Apr 8			

Course Statements

University Statements

Email Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the Undergraduate Calendar for information on regulations and procedures for [Academic Consideration](#).

Drop Date

Courses that are one semester long must be dropped by the end of the last day of classes; two-semester courses must be dropped by the last day of classes in the second semester. The regulations and procedures for [Dropping Courses](#) are available in the Undergraduate Calendar.

Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required, however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

More information: www.uoguelph.ca/sas

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be

aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The [Academic Misconduct Policy](#) is outlined in the Undergraduate Calendar.

Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Resources

The [Academic Calendars](#) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via Courselink and/or class email.

This includes on-campus scheduling during the semester, mid-terms, and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).