MATH 208
Fundamental Mathematics I
Section EC
Winter 2024

This syllabus is subject to change and any changes will be posted in the Announcements section of your eConcordia portal.

Disclaimer: In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

About the Course

What is MATH 208?

MATH 208 is a course offered by the Department of Mathematics and Statistics in which students wills learn a variety of concepts such as functions, finite mathematics, business and financial mathematics, linear algebra, set theory, and probability. Business-specific applications of these mathematical concepts feature heavily in the course.

Instructor

Dr. Georgeana Kristof

E-mail: math208@econcordia.com

You can e-mail your instructor if you have general inquiries, or if there is a delay in hearing back from your Teaching Assistant (TA). Please include the following information in all of your e-mail communications:

- Full name
- Concordia student ID number
- Course number pertaining to your inquiry (i.e. MATH 208)

Course Material

Course Website

To access the course website, log in at www.econcordia.com and find MATH 208 in your *My Courses* list. On your eConcordia homepage you will see a link called *Course Website*. Clicking on that link will take you to the page that contains the learning material for this course.

Your eConcordia account will be valid until the end of the term for which you are registered. Your account will give you access to the online course material on the course website (study materials, Discussion Board, graded assessments) for the duration of the term.

Lesson Structure

In the Couse Website, the learning material is divided into eleven lessons:

- **Lesson 0**: Getting Started
- **Lesson 1**: Graphs, Lines, and Sequences
- **Lesson 2**: Quadratic Equations and Functions
- **Lesson 3**: Exponential and Logarithmic Functions
- **Lesson 4**: Simple and Compound Interest
- **Lesson 5**: Present and Future Values
- **Lesson 6**: Linear Equations and Gauss-Jordan Elimination
- **Lesson 7**: Matrices and Leontief Input-Output Analysis
- **Lesson 8**: Linear Inequalities and Linear Programming
- **Lesson 9**: **(A)** Counting Principles, **(B)** Permutations and Combinations
- **Lesson 10**: **(A)** Sample Spaces and Probability, **(B)** Conditional Probability

Within each lesson you will find:

- A video that gives a brief **OVERVIEW** of the lesson
- A **LEARNING GUIDE** that includes a list of key terms from the lesson
- The **STUDY MATERIALS** in the form of notes and other online tools
- A **SELF ASSESSMENT** to put into practice what you have learned

Textbook

An online version of the textbook *Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences* by Barnett, Ziegler, Byleen, and Stocker, is accessible for free from the home page of the Course Website.

Readings from this textbook are also part of each lesson, and the specific textbook sections to be read are found in each lesson's **LEARNING GUIDE**.

Mathematica (Optional free software)

Mathematica is a computation software that uses the Wolfram programming language. You may download, install, and activate Mathematica to assist you in performing and/or checking certain calculations that you will learn how to perform manually in this course.

There is a link to download Mathematica on the eConcordia course website. The activation code for Mathematica is your Concordia e-mail address.

Note: None of the graded assessments in this course will require the use of Mathematica, and knowledge of the software itself will not be tested.

Assessments

The graded assessments for this course are:

- **Four (4) online Assignments**, on the platform MyLab Math
- The **Midterm Test**, on the platform MyLab Math
- The **Final Exam**, in-person, on campus

MyLab Math

MyLab Math is an online homework and testing platform created by the textbook publisher Pearson.

The link to access MyLab Math for this course is on the home page of the Course Website.

It is your responsibility to follow each question's instructions and to ensure that the format of your answers is correct according to the standards of MyLab Math.

Answers which have been marked incorrect, even if only because of formatting issues, will not be reconsidered.

For more information, see the section titled "Warning About Math Notation" in this course outline.

Assignments

There are 4 assignments in total, all of them to be done on the online platform MyLab Math**:**

- Assignment #1 will cover lessons 0, 1, and 2
- Assignment #2 will cover lessons 3, 4, and 5
- Assignment #3 will cover lessons 6, 7, and 8
- Assignment #4 will cover lessons 9 (A), 9 (B), and 10 (A)

The questions in each assignment are based on the study materials posted on the Course Website.

Read the questions and instructions carefully, and make sure you input your answers in the proper format and using the proper notation required by MyLab Math.

The assignment due dates are listed in the **Agenda** at the end of this course outline.

Late assignments will NOT be accepted.

Midterm Test

The Midterm Test will be done on the online platform MyLab Math. It will cover **Lessons 1 to 5** and will take place on **Wednesday March 6**.

The test will be accessible from 9:00 AM to 11:59 PM (ET) on the day it is assigned.

Once you begin, you will have 75 minutes to complete the test, **or until it closes** at 11:59 PM (ET), whichever comes first.

Notes:

- If you encounter a **technical problem** while accessing the midterm test, you must take a screenshot of the problem and contact your TA to report the problem immediately.
- If you miss the midterm for a legitimate reason (e.g. illness, death of a family member), you must contact the instructor at most one day after the test.

If you contact the instructor 2 or more days after the deadline, any requests for an extension will not be granted.

- Requests for extensions for the midterm test will only be considered if you have verifiable proof (e.g. a doctor's note) to support your claim, otherwise you will obtain a grade of 0 for the missed assessment.

Students registered with Concordia's Access Centre for Students with Disabilities (ACSD) will have the duration of their midterm tests automatically adjusted.

Final Exam

The Final Examination will be held **in-person**. The exam will cover all of the material in the course (from **Lessons 1 to 10**).

Note: You are responsible for finding out the date and time of the final exam once the schedule is posted by the Examinations Office. Conflicts or problems with the scheduling of the final exam must be reported directly to the Examinations Office, not to your instructor.

Note: To pass MATH 208 EC, you must receive a minimum score of 50% on the final exam.

Calculators

Only calculators approved by the Department (with a sticker attached as a proof of approval) are permitted for the final exam. For a list of Approved and Not-approved calculators, see: www.concordia.ca/artsci/math-stats/services.html

Evaluation Scheme

Your final grade will be calculated using the following evaluation scheme:

- Assignments   20%
- Midterm Test   20%
- Final Exam   60%

Note: To pass MATH 208 EC, you must receive a minimum score of 50% on the final exam.

Letter Grades

The following table shows the percentage to letter grade conversion for MATH 208 EC:

Letter	A+	A	A-	B+	B	B-	
% Score	90-100	85-89	80-84	77-79	73-76	70-72	
Letter	C+	C	C-	D+	D	D-	F
% Score	67-69	63-66	60-62	57-59	53-56	50-52	<50

Your final letter grade for the course will be posted in your Student Hub at the end of the term.

Warning About Math Notation

Learning with technology has many advantages. But it also requires more attention to detail. In particular, the answers questions on MyLab Math may only be marked as "correct" if they are entered in the correct format.

For example, most mathematical systems (including MyLab Math) will require that fractions be written in "reduced form", by dividing out factors that are common to the numerator and denominator. Depending on the context, a fraction such as 12/24 will need to be reduced to 1/2, and writing 12/24 as an answer may be marked as incorrect. Similarly, the fraction 24/12 will need to be reduced to 2, and 24/12 may be marked as incorrect.

Another frequently encountered situation involves numbers with currency units (dollars and cents). Such numbers are expected to be accurate to two decimal places. For example, writing $12.354 or $12.357 as answers in a finance problem may be marked as incorrect, since the system is expecting $12.35 (instead of $12.354) and $12.36 (instead of $12.357).

Communication and Extra Help

Teaching Assistants

Due to the large number of students enrolled in this course, you will be assigned a Teaching Assistant (TA) by week 2. Their contact info (email address) will be posted on your eConcordia homepage.

TAs will help you with your studies, especially with any math questions you have, however, they are not required to help you with technical issues.

Please include the following information in all of your e-mail communications with your TA:

- Full name
- Concordia student ID number
- Course number pertaining to your inquiry (i.e. MATH 208)

Please allow for a 24-hour response time during the week (Monday-Friday). TAs check their messages once over a 48-hour weekend period, and are not available on statutory or university holidays.

Save a copy of all e-mail correspondence for the duration of the term and until you have received your final letter grade for the course.

You are expected to be polite at all times. Communications that do not meet this requirement will not be answered.

Discussion Board

As of 2:00 PM on the first day of class, a Discussion Board will be activated and accessible from the *Discussion Board* link on the eConcordia homepage.

The Discussion Board is the ideal place for you to ask questions about anything that is unclear about the course material. While the TAs are responsible for answering questions (the instructor will monitor and moderate discussions), **all students** are encouraged to read and answer the posted questions.

Here are some guidelines to follow for posting on the Discussion Board:

- Do not post any personal information on the discussion board.
- Keep all posts and questions pertinent to the course material.
- Questions about grades or questions of a personal nature must be addressed directly to your TA or instructor.

- You can ask or answer questions about the concepts taught in the course, the self-assessments, the textbook, examples from videos, or even using your calculator.
- **Do not ask others to solve your assignment problems for you,** though asking for a hint or help getting started is acceptable.
- Read the other postings to confirm that your question has not already been asked and answered.
- Be respectful. Refrain from making offensive statements and derogatory comments.
- Students who fail to respect these rules will be asked to leave the discussion. It is within our discretion and authority to remove or edit any posting at any time.

Note: The Discussion Board will be closed on the day of the midterm test.

If a question that you posted on the Discussion Board does not get answered or resolved in a timely manner, please e-mail your TA.

Office Hours

In fairness to students who live out-of-town, the instructor and the TAs have no in-person office hours. However, students may request on-line office hours with either their TA or the instructor.

E-mail correspondence and the Discussion Board are the preferred means of communication.

Announcements

The Announcements are the instructor's means of communicating important changes and updates to you on a regular basis. Please keep up to date by reading the announcements on a weekly basis. The announcements can be found at the centre of your eConcordia homepage.

To receive announcements in your email inbox, click on *My Profile -> Edit Profile* on the eConcordia homepage, select the box next to *I would like to receive course announcements by email* (below your personal information), and click **Update**.

Math Help Centre

The Department of Mathematics and Statistics has a free Math Help Centre for students enrolled in MATH 208 where you can ask a tutor for one-on-one help. The tutors at the Math Help Centre are graduate students in mathematics who will help you with particular questions, explain things to you, and give you hints and insight. Its schedule of operation will be posted by Week 2 in the Department and on the Department webpage:
https://www.concordia.ca/artsci/math-stats/services/math-help-centre.html

Student Success Centre

Concordia University's Success Centre (https://www.concordia.ca/students/success.html) offers a variety of resources to students. Visit https://www.concordia.ca/students/success/learning-support/math-help.html to learn about available resources.

To book an appointment for one-on-one tutoring for MATH 208, you can go to: https://www.concordia.ca/students/success/learning-support/math-help.html#tutoring

Study Habits

To succeed in an online course, good study habits are essential. A learner who is motivated, self-disciplined, and has good organizational skills will be able to progress normally in the course. Here are some tips to help you succeed:

- Set aside some specific days and times to work on the course.
  On average, a student should spend **six hours per lesson** in MATH 208. This time should be spent reading (and re-reading) the study materials in Mathematica and the textbook, working on the self-assessment, and completing the assignments.
  Note that six hours is an estimate only and should be adjusted based on your ability to learn the material. More time will be needed to study for the midterm and final exam.
- Complete your work early in the week so that you have time to e-mail your TA if you have any questions.
- Do NOT wait until the last day before a deadline to complete an assessment. Use the agenda to help you plan ahead.
- As you work through each lesson, write down the important formulas and procedures that you learn.
  This will keep you alert while you watch the videos, and it will also make it easier for you to study for the exams.

Technical Help and Support

eConcordia Help Desk

If you experience any technical problems with the eConcordia website, please contact the **eConcordia HelpDesk**:

- **E-mail**: helpdesk@econcordia.com
- **Phone**: (514) 848-8770
- **Toll-free:** (888) 361-4949

The Help Desk is open Monday to Friday from 9:00 AM to 5:00 PM ET.

The necessary technical requirements to ensure the eConcordia course website works properly can be found here: Technical Requirements. The recommended web browsers are Google Chrome on PC, and Safari and Google Chrome on Mac devices.

MyLab Math Support

If you are experience problems accessing MyLab Math from the eConcordia website, try using a different web browser, or try the following steps:

- Clear your browser's cache: https://support.pearson.com/getsupport/s/article/Deleting-Browser-Cached-Files-and-Cookies
- Verify if your browser settings are configured correctly for MyLab Math: https://support.pearson.com/getsupport/s/article/BrowserSettings

Other Important Information and Useful Links

Topic	Link
Academic Integrity	Academic Integrity
Educational Technology Guidelines	Concordia Educational Technology Guidelines for Faculty and Students (the "Guidelines")
Access Centre for Students with Disabilities	ACSD

Concordia Library Citation & Style Guides	[How to cite...](#)
Course Communication Tools	[Communication](#)
eConcordia Policies	[Policies](#)
Final Exams Information	[Final Exams](#)
Helpdesk/Support	[FAQ](#)
Multifactor Authentication	[MFA for Students](#)
Refunds	[Refunds](#)
Technical Requirements	[Technical Requirements](#)
Tips for Studying Online	[Studying Tips](#)
Tips on how to reach online learning goals (learning modules)	[How to Succeed @ eConcordia](#)

Third-Party Software and Websites

Here is an excerpt on Concordia's policy on educational software or services developed and owned by third parties, including those linked to textbooks, in-class surveys, lecture capture, virtual classrooms, course assignments and quizzes can be invaluable tools for the development and teaching of courses.

Third-party software/websites that require personal information (name, email, student number, etc.)

Students are advised that external software and/or websites will be used in the course, and that students may be asked to submit or consent to the submission of personal information (for example, name and email) to register for an online service. Students are responsible for reading and deciding whether or not to agree to any applicable terms of use. Use of this software and service is voluntary. Students who do not consent to the use the software or service should identify themselves to the course instructor as soon as possible, and in all cases before the DNE deadline, to discuss alternate modes of participation.

Third-party software/websites for work submission

Students are advised that external software and/or websites will be used in the course and that students may be asked to submit or consent to the submission of their work to an online service. Students are responsible for reading and deciding whether or not to agree to any applicable terms of use. Use of this software and service is voluntary. Students who do not consent to the use the software or service should identify themselves to the course instructor as soon as possible to discuss alternate modes of participation that do not require them to give copyright or the right to use their work to a third party.

By using the external software or websites, students agree to provide and share their work and certain personal information (where applicable) with the website/software provider. Students are advised that the University cannot guarantee the protection of intellectual property rights or personal information provided to any website or software company. Intellectual property and personal information held in foreign jurisdictions are subject to the laws of such jurisdictions.

Third-party technology to record a course

Note that, as a part of this course, some or all of the lectures and/or other activities in this course may be recorded. Recordings will be focused on the instructor and will normally exclude students. It is possible, however, that your participation may be recorded. If you wish to ensure that your image is not recorded, speak to your instructor as soon as possible.

Tutorial Companies

Please note that private tutorial companies, some of whom aggressively promote their services on and off campus, are not authorized by Concordia University to distribute flyers on university premises and may not use Concordia University facilities to promote or provide their services.

Concordia University and its academic departments do not have any affiliation with these companies even though names such as JMSB, Concordia, or references to specific departments often appear in a visible way. If you are interested in the University's approved tutoring services, consult the services listed in your course outline or other services listed on the University's website.

ChatGPT and similar generative AI products

Chat GPT is a predictive text-generating artificial intelligence (AI). While it may prove useful in certain circumstances, it is not designed and is not intended to solve mathematical problems. In many cases, when prompted to solve a mathematical problem, Chat GPT will fail to provide a structured and sound mathematical answer.

For this reason, the use in this course of generative artificial intelligence tools or apps (including tools like ChatGPT and other AI writing or coding assistants) for assignments and the midterm test is prohibited.

MATH 208 - Fundamental Mathematics I Agenda
Winter 2024

All deadlines indicated are on the due date listed by 11:59 p.m. unless otherwise indicated.

Week 1 : January 15 - January 21	
January 15	**Classes begin, Winter term**
January 15	**Discussion Board opens at 2:00 PM**
	Read the Course Outline
	Navigate the course website to find links to the lessons, the study materials, MyLab Math, and the textbook
	Lesson 0 - Getting Started
	Lesson 1 - Graphs, Lines and Sequences
Week 2: January 22 - January 28	
	Lesson 2 - Quadratic Equations and Functions
Week 3: January 29 - February 4	
January 29	**Deadline to add winter-term courses**
January 29	**Deadline for withdrawal with tuition refund (DNE) from winter-term courses**
	Lesson 3 - Exponential and Logarithmic Functions
February 4	**Assignment 1 (Lessons 0, 1, 2) due at 11:59 PM**
Week 4: February 5 - February 11	
	Lesson 4 - Simple and Compound Interest

Week 5: February 12 - February 18	
	Lesson 5 - Present and Future Value
Week 6: February 19 - February 25	
	Lesson 6 - Linear Equations and Gauss-Jordan Elimination
February 25	**Assignment 2 (Lessons 3, 4, 5) due at 11:59 PM**
Mid-Term Break: February 26 - March 3	
February 26	**Reading week begins**
February 29	**Deadline to submit required documentation to register with the <u>Access Centre for Students with Disabilities</u> and request exam accommodations for the Winter 2024 final examination period**
March 1	**President's Holiday - University Closed**
March 3	**Reading week ends**
Week 7: March 4 - March 10	
	Lesson 7 – Matrices and Leontief Input-Output Analysis
March 6	**Midterm Test (Lessons 1 to 5), 9:00 AM to 11:59 PM**
Week 8: March 11 - March 17	
	Lesson 8 – Linear Inequalities and Linear Programming
Week 9: March 18 - March 24	
	Lesson 9(A) - Counting Principles
March 24	**Assignment 3 (Lessons 6, 7, 8) due at 11:59 PM**
Week 10: March 25 - March 31	
	Lesson 9(B) – Permutations and Combinations
March 29	**University Closed**

March 30	**University Closed**
March 31	**University Closed**
Week 11: April 1 - April 7	
April 1	**University Closed**
	Lesson 10(A)– Sample Spaces and Probability
Week 12: April 8 - April 14	
	Lesson 10B - Sample Spaces and Conditional Probability
April 8	**Last day for instructor-scheduled tests or examinations**
April 14	**Assignment #4 (Lessons 9 (A), 9 (B), 10 (A)) due at 11:59 PM**
Week 13: April 15 - April 21	
April 15	**Last day of classes**
April 17	**Deadline for academic withdrawal (DISC) from two-term and winter-term courses.**
Examinations Period: April 22 - May 1	
	Final Exam date, time and location is posted on your Student Hub