

MATH 208
Fundamental Mathematics I
Summer 2021

- Instructor:** Dr. U. Tiwari
Email: umanath.tiwari@concordia.ca
- Preface:** Due to exceptional circumstances, this course will be taught, and all assessments will be done completely ONLINE. There will be video lectures via Zoom during the scheduled course hours. Given the subject matter and nature of this course, **the midterm and the final exams will be given online through MyLabMath.**
- Textbook:** *Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences*, 14th Edition, by Barnett, Ziegler, Byleen & Stocker, Pearson Education, Inc.
The digital version of the textbook will be available at:
<https://www.co-opbookstore.ca/service/textbooks/>
The print version of the textbook will be available at:
<https://www.bkstr.com/concordiastore/home>
Note: Students should order textbooks as early as possible, especially for printed versions in case books are backordered or there are any shipping delays.
- Prerequisite:** Math 206 or equivalent.
- Office Hours:** Your professor will announce his office hours during which he will be also available to give a reasonable amount of help. The office hours will be held over Zoom and one can also send questions via email. Note that the system does not allow one to reply to an email sent from Moodle. Thus, emails should be sent from one's own emailer, not Moodle. Note, however, that if you missed a class it is not reasonable to expect your professor to cover the missed material for you.
- Math Help Centre:** A Math Help Centre staffed by graduate students is available. The schedule of its operation will be posted on the Department webpage (<https://www.concordia.ca/artsci/math-stats/services/math-help-centre.html>).
- MyLabMath:** Every student who buys an electronic version of the textbook will also receive an access code to an online system called **MyLabMath**. Once they have registered for **MyLabMath**, student can download the Pearson e-text 2.0 app so that they can access the textbook from their phone or tablet. The system provides you with a full electronic version of the text (an eBook) as well as many exercises and practice problems. Students will use this system to do online assignments (see **Assignments** below). Students are also strongly encouraged to use this resource to help with problems similar to assignment problems, and in areas where they need extra assistance. If you have an old **MyLabMath** account, please refer to the footnote* on page 2.

Assignments: Students are expected to submit assignments online using **MyLabMath**. Late assignments **will not** be accepted. Assignments contribute 10% to your final grade. Working regularly on the assignments is essential for success in this course. Students are also strongly encouraged to do as many problems as their time permits from the list of supplementary problems included in this outline.

Calculators: Only calculators approved by the Department such as **Sharp EL 531** or the **Casio FX 300MS**, are permitted for the class test and final examination. See <http://www.concordia.ca/artsci/math-stats/services.html#calculators> for details.

Midterm Test: There will be one **midterm test**, based on the material of lectures 1-7, which will contribute up to 25% to your final grade (see the **Grading Scheme** below). Missed tests cannot be made up. **Midterm test will be held during online lecture time (via MyLabMath).**

NOTE: It is the Department's policy that tests missed for any reason, **including illness**, cannot be made up. If you miss the midterm test **because of illness (medical note required)** the final exam will count for 90% of your final grade, and the assignments will count for the remaining 10%.

Final Exam: **The final examination will be given online (via MyLabMath).** This exam will be two hours long and will cover all the material in the course.

NOTE: Students are responsible for finding out the date and time of the final exams 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**. It is the Department's policy and the Examination Office's policy that students must be available to take the final exam on the selected date and time. Conflicts due to travel plans will not be accommodated.

Grading Scheme: The final grade will be based on the higher of (a) or (b) below:

- a) 10% for the assignments,
25% for the midterm test,
65% for the final exam.
- b) 10% for the assignments,
15% for the midterm test,
75% for the final exam.

IMPORTANT: **PLEASE NOTE THAT THERE IS NO "100% FINAL EXAM" OPTION IN THIS COURSE.**

*If you are repeating this course and have an old **MyLabMath** account, you might be able to get your account extended. To request this, please contact our Pearson representative at Christine.Cozens@PearsonEd.com and provide the following information:

- Your full name and Concordia student ID number.
- The name of the course, section, and the term you are currently registered in (e.g. MATH 208/Section AA – Summer 2021).

| Lectures | Topics | | Supplementary Problems | |
|----------|---------------|---|------------------------|-----------------------------|
| 1 | 1.2 | Graphs and Lines | p. 23: | 27, 29, 57, 64, 66, 80. |
| | 2.3 | Quadratic Functions | p. 80: | 20, 27, 38, 66. |
| 2 | 2.4 | Polynomial and Rational Functions | p. 93: | 37, 43, 58, 59. |
| | 2.5 | Exponential Functions | p. 104: | 30, 32, 34, 44, 48, 52. |
| 3 | 2.6 | Logarithmic Functions | p. 115: | 25, 29, 46, 48, 80. |
| | B.2 | Arithmetic and Geometric Sequences | p. 626: | 24, 28, 34, 36, 50. |
| 4 | 3.1 | Simple Interest | p. 132: | 35, 37, 45. |
| | 3.2 | Compound Interest | p. 144: | 33, 43, 45, 52, 62, 66, 68. |
| 5 | 3.3 | Future Value | p. 154: | 21, 28, 30, 36, 40. |
| | 3.4 | Present Value | p. 164: | 20, 28, 36, 42, 44. |
| 6 | 4.1 | Systems of Linear Equations | p. 183: | 15, 27, 66, 68. |
| | 4.2 | Systems of Linear Equations/Augmented Matrices | p. 195: | 40, 50, 55, 59, 63, 65. |
| 7 | 4.3 | Gauss-Jordan Elimination | p. 206: | 44, 48, 52, 56, 58. |
| | 4.4 | Matrices: Basic Operations | p. 219: | 33, 37, 56, 58, 66. |
| 8 | 4.5 | Inverse of a Square Matrix | p. 232: | 28, 48, 52, 54, 60. |
| | 4.7 | Leontief Input-Output | p. 248: | 18, 20, 28, 36, 40. |
| 9 | 5.1 | Inequalities in Two Variables | p. 261: | 9, 13, 42, 46, 52. |
| | 5.2 | Systems of Linear Inequalities in Two Variables | p. 267: | 18, 22, 28, 32, 40. |
| 10 | 5.3 | Linear Programming in Two Dimensions | p. 278: | 18, 20, 24, 28, 32. |
| | 7.3 | Basic Counting Principles | p. 366: | 16, 23, 37, 40, 52. |
| 11 | 7.4 | Permutations & Combinations | p. 378: | 44, 48, 62, 66, 76. |
| | 8.1 | Sample Spaces, Events and Probability | p. 396: | 29, 59, 77, 83, 92. |
| 12 | 8.2 | Union, Intersection and Complement of Events | p. 409: | 62, 68, 80, 82, 86. |
| | 8.3 | Conditional Probability | p. 422: | 29, 31, 39, 48, 62. |
| 13 | REVIEW | | | |

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." [Undergraduate Calendar, Sec 17.10.2]

Note: Zoom is included as an institutionally approved technology. This means we have been assured of the privacy protections needed to use freely within the classroom.

Zoom will be used in this course to facilitate learning at a distance. It may be used to record some or all of the lecture and/or other activities in this course. If you wish to ensure that your image is not recorded, speak to your instructor as soon as possible.

Also, please note that you may not share recordings of your classes and that the instructor will only share class recordings for the purpose of course delivery and development. Any other sharing may be in violation of the law and applicable University policies, and may be subject to penalties.

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

Concordia students are subject to the [Code of Rights and Responsibilities](#) which applies both when students are physically and virtually engaged in any University activity, including classes, seminars, meetings, etc. Students engaged in University activities must respect this Code when engaging with any members of the Concordia community, including faculty, staff, and students, whether such interactions are verbal or in writing, face to face or online/virtual. Failing to comply with the Code may result in charges and sanctions, as outlined in the Code.

Intellectual Property

Content belonging to instructors shared in online courses, including, but not limited to, online lectures, course notes, and video recordings of classes remain the intellectual property of the faculty member. It may not be distributed, published or broadcast, in whole or in part, without the express permission of the faculty member. Students are also forbidden to use their own means of recording any elements of an online class or lecture without express permission of the instructor. Any unauthorized sharing of course content may constitute a breach of the [Academic Code of Conduct](#) and/or the [Code of Rights and Responsibilities](#). As specified in the [Policy on Intellectual Property](#), the University does not claim any ownership of or interest in any student IP. All university members retain copyright over their work.

Extraordinary circumstances

In the event of extraordinary circumstances and pursuant to the [Academic Regulations](#) the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the changes.