

MATH 209
Fundamental Mathematics II
Fall 2021

Instructor*: _____

Office/Tel No.: _____

Office Hours: _____

*Students should get the above information from their instructor during class time. The instructor is the person to contact should there be any questions about the course.

Textbook: *Calculus for Business, Economics, Life Sciences and Social Sciences*, 14th Edition, by Barnett, Zeigler, & Byleen. CUSTOM EDITION.

Prerequisite: Math 206 or equivalent.

Office Hours: Your professor will announce her/his office hours during which she/he will be also available to give a reasonable amount of help. 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: In addition to Tutorials, a Math Help Centre staffed by graduate students is available. The schedule of its operation will be posted in the Department and on the Department webpage <https://www.concordia.ca/artsci/math-stats/services/math-help-centre.html>

MyLabMath: Every student who buys a textbook will also receive an access code to an online system called **MyLabMath**. Access codes can also be purchased in the Concordia Book Store. 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 5% 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 (with a sticker attached as a proof of approval), such as **Sharp EL 531** or the **Casio FX 300MS**, available at the Concordia Bookstore, 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 weeks 1-6, which will contribute up to 25% to your final grade (see the **Grading Scheme** below). The test will be **common** for all sections of this course and will be held on **Sunday October 24, at 2:00 P.M.** Students who will not be able to write the test that day for a valid reason, e.g. religious (to be reported to the section's **instructor** in advance) or illness (*Short-Term Absence form or a valid medical note required*), may write an alternate midterm test on **Saturday October 30, 2021, at 10:00 A.M.**

It is the Department's policy that tests missed for any reason, including illness, cannot be made up. If you miss the midterm for any valid reason, e.g. illness, religious, etc., supported by appropriate documentation, the final exam will count for 90% of your final grade, and the assignments will count for the remaining 10%.

Travel arrangements are not considered a valid reason for missing the test.

NOTE: If you are taking another MATH 200 level course with a common midterm test at the same time as this one, you may choose which of the two tests you want to write. You must then inform the instructor of the other course that you will not write that test because of the time conflict between the two courses. In this case, the 90%-10% formula will apply to that other course.

Final Exam: The final examination will be three 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.**

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

- a) 5% for the assignments,
25% for the midterm test,
70% for the final exam.
- b) 5% for the assignments,
15% for the midterm test,
80% 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 209/Section AA - Fall 2021).

Lectures	Topics	Supplementary Problems
1	2.1 Introduction to Limits 2.2 Infinite limits	p. 102: 11, 17, 25, 33, 41, 43, 45, 47, 61, 83. p. 114: 17, 43, 75, 81.
2	2.3 Continuity 2.4 The Derivative	p. 126: 15, 19, 21, 29, 35, 37. p. 141: 11, 23, 27, 35, 81.
3	2.5 Basic Differentiation 2.6 Differentials 2.7 Marginal Analysis in Business	p. 152: 19, 31, 47, 59, 91. p. 160: 23, 25, 31, 49. p. 169: 11, 15, 27, 33.
4	3.1 Review of the constant e and continuous interest 3.2 Derivatives of Exponential and Logarithmic Functions	p. 185: 11, 17, 29, 35, 47. p. 194: 13, 15, 21, 45.
5	3.3 Derivatives of Products & Quotients 3.4 The Chain Rule	p. 202: 11, 19, 25, 33, 93, 97. p. 212: 21, 24, 35, 51, 60, 97.
6	3.5 Implicit Differentiation 3.6 Related rates	p. 220: 13, 19, 21, 35, 59. p. 226: 13, 15, 19, 33, 37.
7	3.7 Elasticity of Demand 4.1 First Derivative and Graphs	p. 233: 33, 35, 47, 49, 83. p. 252: 11, 15, 17, 29, 33, 51, 85, 97.
8	4.2 Second Derivative and Graphs 4.4 Curve-sketching techniques	p. 269: 9, 15, 17, 21, 25, 29, 39, 49, 99. p. 292: 9, 23, 35, 63, 77.
9	4.5 Absolute Maxima and Minima 4.6 Optimization	p. 302: 11, 13, 17, 23, 31, 43, 61. p. 313: 9, 11, 21, 29.
10	5.1 Antiderivatives 5.2 Integration by substitution	p. 332: 11, 13, 23, 37, 43, 45, 55, 61, 85. p. 344: 11, 15, 19, 21, 47, 63, 77, 79.
11	5.3 Differential Equations; Growth and Decay 5.4 The Definite Integral	p. 354: 11, 15, 53, 63, 77, 81. p. 366: 31, 33, 41, 43, 51, 55.
12	5.5 Fundamental Theorem of Calculus 6.1 Area between Curves	p. 377: 17, 21, 29, 31, 59, 71, 83. p. 395: 31, 35, 41, 45, 49, 51, 55, 83, 85.
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]

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 change.