Department of Mathematics & Statistics
Concordia University

MATH 209
Fundamental Mathematics II
Summer 2018

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*, 13th 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

MyMathLab: Every student who buys a textbook will also receive an access code to an online system called **MyMathLab**. 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 MyMathLab account, please refer to the footnote* on page 2.

Assignments: Students are expected to submit assignments online using **MyMathLab**. 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. A solutions manual for all odd-numbered questions is packaged with the textbook.

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 https://www.concordia.ca/content/dam/artsci/math-stats/docs/AppCalculatorList.pdf for a list of Approved and Not-Approved calculators.

Midterm Test: There will be one **midterm test,** based on the material of lectures 1-6, which will contribute up to 20% to your final grade (see the **Grading Scheme** below).

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 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**. It is the Department's policy and the Examinations Office's policy that **students are to be available until the end of the final exam period. 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,
20% for the midterm test,
70% for the final exam.

b) 10% for the assignments,
10% for the midterm test,
80% for the final exam.

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

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]*

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*If you are repeating this course and have an old **MyMathLab** account, you might be able to get your account extended. To request this, please contact our Pearson representative at vanessa.karmazyn@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 - Summer 2018).

Lectures	Topics	Supplementary Problems
1	2.1 Introduction to Limits 2.2 Infinite limits	p. 105: 11, 17, 25, 33, 41, 43, 47, 61, 83. p. 117: 17, 43, 77, 85.
2	2.3 Continuity 2.4 The Derivative	p. 128: 15, 19, 21, 29, 35, 37. p. 143: 11, 23, 27, 35, 79.
3	2.5 Basic Differentiation 2.6 Differentials 2.7 Marginal Analysis in Business	p. 153: 19, 31, 47, 59, 91. p. 161: 23, 25, 31, 49. p. 170: 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, 27, 35, 45. p. 194: 15, 19, 21, 41.
5	3.3 Derivatives of Products & Quotients 3.4 The Chain Rule	p. 201: 11, 19, 25, 33, 93, 97. p. 211: 21, 28, 39, 55, 63, 97.
6	3.5 Implicit Differentiation 3.6 Related rates	p. 218: 11, 15, 17, 21, 31, 55. p. 224: 13, 15, 19, 33, 37.
7	3.7 Elasticity of Demand 4.1 First Derivative and Graphs	p. 231: 33, 35, 47, 49, 83. p. 249: 11, 15, 17, 27, 29, 33, 55, 85, 97.
8	4.2 Second Derivative and Graphs 4.4 Curve-sketching techniques	p. 266: 9, 15, 17, 21, 25, 29, 39, 59, 99. p. 289: 9, 19, 31, 65, 77, 81.
9	4.5 Absolute Maxima and Minima 4.6 Optimization	p. 299: 11, 13, 17, 23, 31, 43, 61. p. 310: 9, 13, 21, 29.
10	5.1 Antiderivatives 5.2 Integration by substitution	p. 328: 11, 13, 23, 37, 43, 45, 55, 61, 85. p. 340: 11, 15, 19, 21, 47, 63, 77, 79.
11	5.3 Differential Equations; Growth and Decay 5.4 The Definite Integral	p. 349: 11, 15, 53, 63, 77, 81. p. 360: 31, 33, 41, 43, 51, 55.
12	5.5 Fundamental Theorem of Calculus 6.1 Area between Curves	p. 371: 17, 21, 29, 31, 59, 71, 83. p. 388: 33, 35, 43, 45, 49, 51, 55, 89.
13	**REVIEW**	