Department of Mathematics & Statistics
Concordia University

MATH 209
Fundamental Mathematics II
Summer 2015

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.

Course Examiner: Dr. D. Sen

Credit: Math 209 (Fundamental Mathematics II) is a 3-credit course, primarily for pre-commerce students. PLEASE NOTE: Math 209 is NOT credited towards any university degree if university credit for MATH 203 or any course equivalent to MATH 203 or 209 has already been granted.

Caution: If you have not taken the pre-requisite courses, you are taking this course at your own risk.

Textbook: *Calculus for Business, Economics, Life Sciences and Social Sciences*, 12th Edition, by Barnett, Zeigler, & Byleen. CUSTOM EDITION.

Math Help Centre: It has been organized to help students in solving problems. The location is LB 912 and the schedule is posted in the Department.

Assignments: Assignments are given for every class. Students are expected to submit electronic assignments through **MyMathLab**. There is not enough class time to do all examples needed for a good understanding of the material, and so students are strongly encouraged to do as many problems on their own as their time permits. A solutions manual for all odd-numbered questions is packaged with the text to provide quick and through feedback.

MyMathLab: Every student who buys a book will 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. However, students are strongly encouraged to use this free resource to help with problems similar to assignment problems, and in areas where they need extra assistance.

Calculators: Only calculators approved by the Department are permitted in the class-test and final examination. The calculators are the **Sharp EL531** and the **Casio FX 300MS.**

Test: There will be one midterm test during the course. Missed tests cannot be made up.

NOTE: It is the Department's policy that test missed for any reason, ***including illness,*** cannot be made up. If you miss the midterm test because of illness ***(to be confirmed by a valid medical note),*** the final exam can count for 90% of your final grade.

Final Exam: There are no exemptions from this three-hour exam.

Final Grade: The final grade will be based on the higher of **(a) or (b):**

a) 10% for the assignments, 20% for the midterm test, and 70% for the final exam.
b) 10% for the assignments, 10% for the midterm test, and 80% for the final exam.

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

Lecture	Topics	Supplementary Problems
1	3.1 Introduction to Limits 3.2 Infinite limits 3.3 Continuity	p. 138: 3, 9, 17, 25, 33, 35, 39, 53, 67. p. 150: 9, 31, 53, 69. p. 161: 7, 13, 19, 21, 27, 29.
2	3.4 The Derivative 3.5 Basic Differentiation	p. 175: 3, 9, 13, 21, 63. p. 184: 11, 23, 39, 51, 83.
3	3.6 Differentials 3.7 Marginal Analysis in Business 4.1 Review of the constant e and continuous interest	p. 192: 15, 17, 23, 41. p. 200: 3, 7, 19, 25. p. 215: 3, 9, 19, 27, 37.
4	4.2 Derivatives of Exponential and Logarithmic Functions 4.3 Derivatives of Products & Quotients	p. 224: 7, 11, 13, 29. p. 231: 3, 11, 17, 25, 81, 87.
5	4.4 The Chain Rule 4.5 Implicit Differentiation	p. 240: 5, 7, 43, 59, 67, 97. p. 248: 3, 7, 9, 13, 23, 47.
6	4.6 Related rates 4.7 Elasticity of Demand	p. 254: 5, 7, 11, 25, 29. p. 260: 25, 27, 31, 33, 67.
7	5.1 First Derivative and Graphs	p. 278: 3, 7, 9, 19, 23, 27, 49, 79, 97.

8	5.2 Second Derivative and Graphs 5.4 Curve-sketching techniques	p. 296: 1, 5, 7, 11, 19, 23, 33, 53, 55, 67, 81. p. 319: 1, 17, 29, 63, 71, 75.
9	5.5 Absolute Maxima and Minima 5.6 Optimization	p. 330: 3, 5, 9, 13, 21, 33, 51. p. 340: 3, 5, 13, 21.
10	6.1 Antiderivatives 6.2 Integration by substitution	p. 358: 3, 5, 15, 21, 35, 37, 51, 69, 87. p. 370: 3, 7, 11, 13, 39, 53, 67, 69.
11	6.3 Differential Equations; Growth and Decay 6.4 The Definite Integral	p. 379: 3, 7, 29, 39, 53, 57. p. 390: 25, 27, 35, 37, 45, 49.
12	6.5 Fundamental Theorem of Calculus 7.1 Area between Curves	p. 401: 9, 13, 21, 23, 51, 63, 75. p. 417: 27, 29, 37, 39, 43, 45, 49, 83.
13	**REVIEW**	