

Math U130

Math for Business and Economics

Fall 2007

Key Number: 60405

Syllabus

Text: *Calculus Concepts (Third Edition): An Informal Approach to the Mathematics of Change* by LaTorre, Kennelly, Fetta Reed, Harris, and Carpenter

Materials: TI-83, TI-83 Plus, or TI-84 calculator and Class Packet

Instructor: John Gonzalez

My Office: 536 Nightingale

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Office Hours: Wednesday 1:30-3:30pm

Class Times: 9:15-10:20 Mon., Wed. & Thurs.

Classroom: Room 262F West Village

Course Content: In this course we will discuss some important mathematical concepts and tools used to solve problems in business and economics. Emphasis will be placed on constructing and using certain mathematical models (linear, exponential, polynomial, logistic) to extract or infer information needed to solve a variety of problems.

MTH U130 is a prerequisite for MTH U131 (Calculus for Business and Economics). Note that MTH U130 may not be used to satisfy the mathematics proficiency requirement of the College of Arts and Sciences.

The syllabus is subject to change. All changes will be announced in class and via email. Students should read instructor emails frequently, as announcements will be made periodically.

If you have any questions about the course, the homeworks, the lecture, or anything else that you are not comfortable asking in class please feel free to ask me after class, email me, or come to my office hours.

If you have any complaints or concerns about how the course is proceeding, please address them me. If you wish to speak to someone else then please contact Prof. King.
Prof. Donald King 447 Lake Hall 617-373-5679 d.king@neu.edu

Problem Sets: The class lectures will be organized around a series of problem sets, which are detailed later on in this document. The problems should generally be completed before the scheduled quiz date and I will keep you informed if those dates change. *The problem sets are not submitted for a grade* but the problems are designed to help your understanding and to help you study for the quizzes. The problem sets include problems from the textbook, from the document “Supplementary Problems”, and review quizzes from the document “Review Quizzes”. You are encouraged to collaborate with friends or others if you have difficulty solving these problems. Some problems will be discussed in class but if you cannot solve all problems then please find help from me or someone else. After the discussion of a review quiz is completed in class, a corresponding quiz will be given in the following class. A midterm review (the document “Midterm Review”) will also be assigned as a problem set. After it is discussed, a midterm will follow.

Examinations: There will be a 30 min quiz approximately every week and a full hour midterm. The schedule for quizzes is given below but is subject to change. *Make-up quizzes will be given only in the case of a university supported absence (i.e. jury duty, military duty, hospitalization, a university supported activity, an athletic competition, or a religious holiday) and if a note is submitted from the proper authorities (i.e. doctor's note, coach's note, professor's note, etc.).*

The final exam is a two hour examination. All students (without legitimate conflicts) will take the final exam at the scheduled time. The final exam is cumulative and is common for all sections of MTH U130. *Do not make travel plans which conflict with the final exam as this will not be a valid excuse for taking a make-up exam.*

Project: A project involving mathematical modeling is required. This project is described in detail in the class packet.

Grading: Your final grade will be calculated as follows:

30% Weekly Quizzes
15% Midterm
15% Project
40% Final Exam

Tutoring: You may receive free extra help at the Math Tutoring Center in 540B Nightingale. You just need to sign up for an appointment. Please seek help as soon as you experience any difficulty with the material, *do not wait until just before an exam.*

The hours for the Tutoring Center in 540B NI are:

Monday, Tuesday & Wednesday 10:00 AM – 9:00 PM

Thursday 10:00 AM – 6:00 PM

Friday 10:00 AM – 1:00 PM

In addition, tutoring is available in Snell Library. Go to the Peer Tutoring Center on the 2nd floor or call 373-2150 to schedule a tutor.

Cheating: Cheating will not be tolerated and all incidents of cheating will be reported to the Office of Judicial Affairs. Cheating in this class includes (but is not limited to): looking at the papers of others during a quiz or test, talking to other students during a quiz/test, looking at notes during a quiz/test (unless it is specifically announced that you may), copying other students' work outside of class, or plagiarism during the project., etc.

In this class, working together on homework is NOT considered cheating. Also, the use of advanced calculators is NOT considered cheating in this course. The instructor reserves the right to decide on the spot between what constitutes a "calculator" and what constitutes a full-fledged "computer".

If you have any questions as to what constitutes cheating, please ask me.

Attendance: It is essential that you attend class regularly. The easiest way for you to learn the material, and to know what material has been covered, is to come to class each day. Students are responsible for finding out what material has been covered or what announcements have been made on days that they miss class.

Schedule of Topics and Assignments

The following table includes a calendar with homework problems to be covered.

They may change as we progress through the course and you are responsible to keep up with all changes that are made..

Period	Topics	Problems	Quiz Date
Sept 5-10	Models, functions, and graphs; straight lines; linear functions	Sec. 1.1: 13, 17,19,24,27-30 Supplementary 1-12 Quiz 1 Review	Wed Sept 12
Sept 12.- 19	graphing*; 2 nd Calc/Intersect*; Statplot*; linear models; linear regression*; exponential models; exponential functions; exponential regression*	Sec. 1.1: 31–38; Sec. 1.2: 3, 6, 33a–b; Sec. 1.4: 8, 10, 11 Sec. 1.4: 12, 21, 23a–f, 24–26 Supplementary 13–17; Quiz 2 Review	Thurs Sept 20
Sept 20- 26	percentage growth rate; compound interest; logarithmic functions; solving exponential equations	1. Sec. 2.1: 9, 12, 16, 18, 19, 20 2. Supplementary 18–20 3. Supplementary 21–30; Quiz 3 Review	Thurs Sept 27

Sept 27- Oct 3	polynomial equations; factoring quadratic equations; logistic functions; selecting a model	1. Sec. 2.4 7cd, 10, 12, 13ab, 25bc, 26a–c, 27ab; Supplementary 36–40 2. Supplementary 31–35; 2.5: 1–6, 11, 13; 3. Quiz 4 Review	Thurs Oct 4
Oct 5	PROJECT PART J DUE		Fri Oct 5
Oct 8	COLUMBUS DAY (no class)	No class	Mon Oct 8
Oct 5-11	Review for midterm	Midterm Review problems	no quiz (prepare for midterm)
Oct 15	MIDTERM		Mon Oct 15
Oct 17- 22	supply and demand; logistic regression*; equilibrium prices	1. Sec. 7.3: 9a–c, 10a–c; Supplementary 52, 55, 56 2. Sec. 7.3: 16, 19a–c, 20a–c; Quiz 5 Review	Wed Oct 24
Oct 26	PROJECT PART K DUE		Fri Oct 26
Oct 24- 31	cost, revenue, and profit	1. Supplementary 41, 42, 44 2. Supplementary 45–51, Quiz 6 Review	Thurs Nov 1
Nov 12	VETERANS DAY	No class	No Quiz
Nov 1-14	time value of money; TVM Solver*	1. Supplementary 58–63 2. Supplementary 64–72 3. Supplementary 73–75; Quiz 7 Review	Thurs Nov 15
Oct 26	PROJECT PART L DUE		Fri Nov 16
Nov 21- 22	THANKSGIVING (no class)	No class	
Nov 15- 28	average rates of change; instantaneous rates of change; derivatives	1. Sec. 3.1: 11–14, 17, 26a 2. Sec. 3.2: 7a, 8, 9b, 10, 17, 21, 22 3. Sec. 3.3: 2, 4, 5, 13, 15; Sec. 3.4: 1, 2 4. Sec. 3.5: 5, 11, 13, 15; Quiz 8 Review	Thurs Nov 29
Nov 29- Dec 3	Review for final	Final Review problems	No quiz
Dec 7-14	Final Exam Period	Final Exam	Dec 13 10:30am

