Fundamental Methods of Mathematical Economics I, ECON 3410
Department of Economics, Brooklyn College
Course Syllabus, Fall 2014

Instructor: Thomas Hauner
MON, WED 6:30– 7:45 PM
Room B 4137

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Office Hours: By appointment only
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Prerequisite: Economics (or Business) 2200

Required Text: Barnett, Ziegler, Byleen. College Mathematics for Business, Economics, Life Sciences & Social Sciences. Pearson. 12th edition.

Students must be able to access MyMathLab.com (MML) for homework exercises, reviews, problem sets, and solutions to exercises (not just answers, like in the back of the book). MML access also includes an ebook version of the textbook.

There exist four different means of acquiring the book and MML access:

1. Ebook + MML access code
   ISBN: 9780321645920

2. 3-ring binder, or "a la carte", version of textbook + MML access code
   ISBN: 9780321688231

3. Hard cover textbook + MML access code
   ISBN: 9780321714527

4. MML access card (which includes ebook)
   ISBN: 9780321199911

Course Description:

This course will develop the mathematical tools necessary for further study in economics. The aim is to apply algebra, differential calculus, and matrix algebra to economic analysis of stylized questions.

Course Schedule:

The schedule outlined below is tentative, ambitious and subject to change.

Class Dates	*Topics*	*Reading*
Sep 3, Sep 8:	Introduction, algebra review	Appendix A
Sep 10, Sep 15:	Finish algebra review, graphs	Appendix B, Chp 1.1 – 1.3
Sep 17:	Elementary functions and graphs	Chp 2.1 – Chp 2.3
	NOTE: *Last day to drop course without "W" grade.*	
Sep 22:	Elementary functions and graphs	Chp 2.3 – Chp 2.4
Sep 24:	**No class**	
Sep 29, Oct 1:	Exponential and logarithmic functions	Chp 2.5 – Chp 2.6

Oct 6:	**Midterm exam 1**	

Oct 8:	Systems of equations and matrices	Chp 4.1
Oct 13:	**No class**	
Oct 15, Oct 20:	Systems of equations and matrices	Chp 4.2 – Chp 4.3
Oct 22, Oct 27:	Gaussian elimination, matrix operations	Chp 4.4 – Chp 4.6
Oct 29, Nov 3:	Limits and continuity	Chp 10.1 – Chp 10.3
Nov 5, Nov 10:	Derivatives and differentials	Chp 10.4 - Chp 10.7

Nov 12:	**Midterm exam 2**	

Nov 17:	Derivative topics	Chp 11.1 – Chp 11.2
Nov 19, Nov 24:	Special derivative rules	Chp 11.3 – Chp 11.4
Nov 26, Dec 1:	Implicit differentiation, rates	Chp 11.5 – Chp 11.6
Dec 3:	Elasticity, first derivative	Chp 11.7 – Chp 12.1
Dec 8, Dec 10:	Second derivative, l'Hôpital's rule	Chp 12.2 – Chp 12.3
Dec 15:	Sketching techniques, max and min	Chp 12.4 – Chp 12.5

Dec 17:	**Final exam*, *6:00 – 8:00 PM in B 4137**	

Grading:

Homework	20%
Midterm exam (best of 2)	40%
Final exam	40%

- There will be NO makeup exams, unless under a documented extraordinary circumstance.
- There will be 2 midterm exams. The lowest midterm score will be dropped.
- The exams are *not* explicitly cumulative, however the material is naturally cumulative.

Grading Scale:

Letter Grade	%	Letter Grade	%
A	93-100	C	73-77
A-	90-92	C-	70-72
B+	88-89	D+	68-69
B	83-87	D	63-67
B-	80-82	D-	60-62
C+	78-79	F	below 60

Homework:

Homeworks will typically be assigned on a Wednesday and will be due the following Wednesday by midnight. All homework assignments will be on MML and thus require a viable student access code. The course ID is "hauner20936".

Policies:

1. Students are expected to attend all classes and arrive on time.
2. Silence all cell phones during lectures and exams.
3. Students may NOT leave the classroom during exams. Please use the restroom before an exam begins.
4. There are NO makeup exams.
5. Emails to the instructor must contain "ECON 3410" in the subject line.

Studying Tips:

1. Read the textbook, *before* class!
2. **Ask questions.** During lectures, during a scheduled office hour, or via email.
3. Re-read your class notes after each lecture.
4. Copy your notes after lectures and before each exam.
5. Practice, practice, practice. Do as many practice problems as you can, and make an honest effort before looking at the solution.
6. Utilize the Learning Center (1300 Boylan Hall) for tutoring and/or extra help.
7. Do additional problems, reviews, and practice tests in MML.
8. Use alternative resources, like Khan Academy videos online.