

Fundamental Methods of Mathematical Economics I, ECON 3410
Department of Economics, Brooklyn College
Course Syllabus, Spring 2015

Instructor: Thomas Hauner
TUES, THURS 9:30– 10:45 AM
Room NE (Inger Add) 329

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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). Note, 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 (includes eBook access online)
ISBN: 9780321199911

Course Description:

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

Course Schedule:

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

<u>Class Dates</u>	<u>Topics</u>	<u>Reading</u>
Jan 29, Feb 3:	Introduction, algebra review	Appendix A
Feb 5, Feb 10:	Finish algebra review, graphs	Appendix B, Chp 1.1 – 1.3
Feb 12:	No class	
Feb 17:	Elementary functions and graphs <i>NOTE: Last Day to Drop Course Without "W"</i>	Chp 2.1 – Chp 2.3
Feb 19:	Elementary functions and graphs	Chp 2.3 – Chp 2.4
Feb 24:	Exponential and logarithmic functions	Chp 2.5 – Chp 2.6
Feb 26:	Midterm exam 1	
Mar 3:	Systems of equations and matrices	Chp 4.1
Mar 5, Mar 10:	Systems of equations and matrices	Chp 4.2 – Chp 4.3
Mar 12, Mar 17:	Gaussian elimination, matrix operations	Chp 4.4 – Chp 4.6
Mar 19, Mar 24:	Limits and continuity	Chp 10.1 – Chp 10.3
Mar 26, Mar 31:	Derivatives and differentials	Chp 10.4 - Chp 10.7
Apr 2:	Midterm exam 2	
Apr 7, Apr 9:	No class (Spring Recess)	
Apr 14:	Derivative topics	Chp 11.1 – Chp 11.2
Apr 16, Apr 21:	Special derivative rules	Chp 11.3 – Chp 11.4
Apr 23, Apr 28:	Implicit differentiation, rates	Chp 11.5 – Chp 11.6
Apr 30:	Elasticity, first derivative	Chp 11.7 – Chp 12.1
May 5, May 7:	Second derivative, l'Hôpital's rule	Chp 12.2 – Chp 12.3
May 12, May 14:	Sketching techniques, max and min	Chp 12.4 – Chp 12.5
May 19:	Final exam, 8:00 – 10:00 AM in NE (Inger Add) 329	
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.
- *NOTE: A 100% on a midterm and final still results in a B- final grade! Homework counts!*

Grading Scale:

<i>Letter Grade</i>	<i>%</i>	<i>Letter Grade</i>	<i>%</i>
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:

Homework will typically be assigned weekly. All homework assignments will be online on MML and thus require a viable student access code. The course ID is “hauner37223”.

Policies:

1. Students are expected to attend all classes and arrive on time. Attendance will be taken.
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.