

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

Instructor: Thomas Hauner  
TUES, THURS 3:40 – 4:55 PM  
Room WH-305

---

Office: WH-102  
Office Hours: By appointment only  
Email: [thauner@gc.cuny.edu](mailto:thauner@gc.cuny.edu)  
Telephone: (620)-842-8637

**Prerequisite:** Economics (or Business) 2200

**Required Text:** Barnett, Ziegler, Byleen. College Mathematics for Business, Economics, Life Sciences & Social Sciences. Pearson. 12<sup>th</sup> 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 advanced study in economics. The aim is to apply differential calculus and matrix algebra to economic analysis.

**Course Schedule:**

The schedule outlined below is tentative and subject to change.

<u>Class Dates</u>	<u>Topics</u>	<u>Reading</u>
Jan 28, Jan 30:	Introduction, algebra review	Appendix A
Feb 4, Feb 6:	Finish algebra review, graphs	Appendix B, Chp 1.1 – 1.3
Feb 11, Feb 13:	Elementary functions and graphs	Chp 2.1 – Chp 2.3
Feb 18:	Elementary functions and graphs	Chp 2.3 – Chp 2.4
NOTE: <u>Last day to drop course without “W” grade.</u>		
Feb 20:	<b>No class</b> (following Monday schedule)	
Feb 25, Feb 27:	Exponential and logarithmic functions	Chp 2.5 – Chp 2.6
Mar 4:	<b>Midterm exam 1</b>	
Mar 6:	Systems of equations and matrices	Chp 4.1 – Chp 4.2
Mar 11, Mar 13:	Gaussian elimination, matrix operations	Chp 4.3 – Chp 4.6
Mar 18, Mar 20:	Limits and continuity	Chp 10.1 – Chp 10.3
Mar 25, Mar 27:	Derivatives and differentials	Chp 10.4 - Chp 10.7
Apr 1:	<b>Midterm exam 2</b>	
Apr 3:	Derivative topics	Chp 11.1 – Chp 11.2
Apr 8, Apr 10:	Special derivative rules	Chp 11.3 – Chp 11.4
Apr 15, Apr 17:	<b>No class</b> – Spring Recess	
Apr 22:	<b>No class</b> – Spring Recess	
Apr 24:	Implicit differentiation, rates	Chp 11.5 – Chp 11.6
Apr 29, May 1:	Elasticity, first derivative	Chp 11.7 – Chp 12.1
May 6, May 8:	Second derivative, l’Hopital’s rule	Chp 12.2 – Chp 12.3
May 13, May 15:	Sketching techniques, max and min	Chp 12.4 – Chp 12.5
<b>May 22:</b>	<b>Final exam, 3:30 – 5:30 PM in WH-305</b>	

### 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:**

<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:**

Homeworks will typically be assigned on a Tuesday and will be due the following Tuesday (one week later) before class begins. All homework assignments will be on MML and thus require a viable student access code.

**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.