

BOSTON COLLEGE
DEPARTMENT OF ECONOMICS

EC311.01
Fall 1996
T, Th 1:30-3:00 PM
McGuinn 223

Chong-en Bai
148 Carney, x3690
Office Hours: Wed. 3:00-5:00
or by appointment

MATHEMATICS FOR ECONOMISTS

This is an introductory course in mathematical economics. The goal is to learn the application of mathematical concepts to economics. Gaining logical reasoning ability is another objective of the course.

Textbooks:

OS: Ostaszewski, Adam, Mathematics in Economics: Models and Methods, Blackwell, 1993.

SH: Sydsaeter, Knut, and Hammond, Peter J., Mathematics for Economic Analysis, Prentice Hall, 1995.

These textbooks are required reading, and should be purchased.

Course Requirements:

Midterm Exam (Thur., October 17, in class)	30%
Final Exam (Tue., December 17, 9:00am)	40%
Problem Sets	30%

There will be an in-class midterm exam, a comprehensive final exam (dates above), and regular problem sets.

There will be no make-up exams except for special reasons, so pay close attention to the dates. Those who miss an exam without my prior approval will get no credit. Late problem set will get at most 70% of full credit.

Academic Integrity: I expect all students to do only their own work on exams. Discussion on problem sets is encouraged, but each student should write up and hand in his/her own answer to the problem sets.

Contents of the Course

0. Introduction
SH 1.1 - 1.6.
1. Sets and Numbers
OS Ch 1, SH 1.7.
2. Matrices and Vectors
OS Ch 2, SH Ch 12
3. Modeling Consumer Choice
OS Ch 3
4. Discrete Variables
OS Ch 4, SH 20.1, 20.2.
5. Functions
OS 5.1 - 5.15, SH Ch 2, Ch 3.
6. Equilibrium
OS 6.1 - 6.3
7. Limits and Continuity
OS Ch 8, Ch 9, SH 6.1, 6.2, 6.4 - 6.6, 7.1, 7.2.
8. The Derivative
OS Ch 10, SH Ch 4, 5.1, 5.2, 6.3.
9. Continuous Compounding and Exponential Growth
OS Ch 11, SH Ch 8.
10. Taylor's Theorem
OS 14.1 - 14.4, SH 7.3, 7.4
11. Single Variable Optimization
OS 14.5 -14.9, SH Ch 9
12. Partial Differentiation
OS Ch 12, Ch 13, SH 15.1 -15.6, 16.1- 16.8
13. Optimization in Two Variables
OS Ch 15, SH 17.1 -17.8