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Required Text: 
ISBN 0-07-010910-9

Prerequisites: One upper Division course in economics.

### Course Content:

This course is designed to provide students of economics (and other disciplines) with the basic mathematical skills necessary to understand the current economic literature and to successfully complete some of the more advanced courses in economics. The emphasis in this course is on both mathematical skills and economics. For an economist, mathematics is not an end in itself. Nevertheless, mathematics has become the "language" of modern economics and to understand what economists do, it is necessary to acquire certain mathematical skills. The purpose of this course is to fill (partially) that need. After completing this course, you will not "be a mathematician" or a "mathematical economist." You should, however, have a better understanding of many of the mathematical "tricks-of-the-trade."

Three broad topics will be covered: (1) statics (equilibrium analysis), (2) comparative statics, and (3) optimization problems. These topics are covered in the first twelve chapters of the text. A somewhat more specific course outline is presented below. A second course in mathematical economics (Econ 558) covers economic dynamics and mathematical programming.

### Math Anxiety:

Many students are, for one reason or another, apprehensive about courses involving the use of mathematics. Both the author of the text and your instructor are sensitive to this problem. I will assume at the outset that your mathematical skills are limited to a knowledge of basic algebra and that these skills are, perhaps, a bit rusty. Learning about mathematical economics is hard work, but it should cause you no more concern than any other course. Also, you should feel free to see me outside of class if you are having any trouble at all.

### Some suggestions:

Being successful in this course (and learning something) will be much easier if you will:

1. attend class on a regular basis,
2. stay current with the material --do not adopt the attitude of "I can get it later."
3. read the assigned material carefully and slowly,
4. use a pencil and paper as you read,
5. always feel free to ask questions,
6. work a lot of problems, and
7. get help as soon as you think you need it.

### WebCT:

This class will involve the use of WebCT. All grades will be posted on WebCT. You are responsible for checking your grades periodically (at least once a month) and reporting any perceived or real errors to your instructor immediately. Additional materials such as review sheets and problem assignments will also be posted to WebCT. Again, you are responsible for checking the WebCT site on a regular basis!

### Course Outline:

The class will cover the first twelve chapters of Chiang’s text. No dates have been given in the outline below, because each class seems to progress at a different pace. Specific assignments and a schedule will be posted on the WebCT site.

1. The nature of mathematical economics  
   Chapter 1  
2. Economic models  
   Chapter 2  
3. Equilibrium analysis  
   Chapter 3  
4. Linear models and matrix algebra  
   Chapters 4 and 5  
5. Comparative statics and the derivative  
   Chapter 6  
6. Rules of differentiation and their use  
   Chapter 7  
7. Comparative static analysis of general function models  
   Chapter 8  
8. Optimization  
   Chapter 9  
9. Exponential and logarithmic functions  
   Chapter 10
Grading System:

1. Exams: There will be three hour exams (plus the final) scheduled as follows:
   - Exam I  September 26  (Tuesday)
   - Exam II  October 31  (Tuesday)
   - Exam III December 5  (Tuesday)
   - Final December 14  (Thursday)  (3:30 to 5:30 pm)

Each exam will be worth 100 points. The exams will contain problems and short answer questions. All previously covered material may appear on an exam.

2. There will be several homework assignments or quizzes (usually, but not always) problems from the text. There will be something graded almost every day. Homework assignments (or quizzes) are usually worth 5 or 10 points but may be higher or lower. Late homework papers will not be graded.

3. Occasionally, the instructor may assign bonus points (usually 2 or 3 pts)

4. Final grades will be determined on the following basis:
   - A = 90 percent or more of total points
   - B = 80 percent or more of total points
   - C = 70 percent or more of total points
   - D = 60 percent or more of total points
   - F = less than 60 percent of total points

4. You must receive a grade of C or better to obtain a passing grade if you are taking this course on an S/U basis.

5. There are no extra credit assignments or other ways to increase your grade. The final examination is comprehensive. The final exam will also be counted as a make-up exam. There will be no other make-up exams.

6. Withdrawals: The deadline for withdrawing from a course in the fall is October 17, 2006. No faculty or department head signatures are required to drop a class.

7. S/U Grades: For students taking the course on an S/U basis, a grade of at least C is required to obtain an S. AEEC students taking this course to remove a deficiency must obtain a grade of B or better to have the deficiency removed.

8. Discrimination issues: Feel free to call Jerry Nevarez, Director of Institutional Equity, at 505-646-3635 with any questions you may have about NMSU's Non-Discrimination Policy and complaints of discrimination, including sexual harassment.

9. Students with disabilities: Please feel free to call Michael Armendariz, Coordinator of Services for Students with Disabilities, at 505-646-6840 with any questions you may have on student issues related to the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act of 1973. All medical information will be treated confidentially.

10. Incomplete Grades: Under university policy, incompletes may be given only if a student has a passing grade at mid-semester (the last day to withdraw from a class) and is precluded from successful completion of the second half of the course by a documented illness, documented death, family crisis or other similar circumstances beyond the student's control. An incomplete should not be given to avoid assigning a grade for marginal or failing work. Requirements for removal of the I grade must be clearly stated on the I grade form and a copy of the form must be provided to the student. It is up to the faculty member to determine whether an incomplete is appropriate. Incompletes do not automatically convert to F's if the course is not completed.