Econ 204  
Mathematical Tools for Economists  
Summer/Fall 2008  
Revised 7/23/08, revisions indicated by **

Instructors

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   drop-in hours MTuWThF 10:00-11:00  
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Rick or Congyan hold office hours MTuWThF 3:30-5:00 in 597 Evans**

Course Material
The first half of the course will cover Chapters 1-5 (and a small part of chapter 6) of Angel de la Fuente, *Mathematical Methods and Models for Economists*. In addition, we will cover material on differential and difference equations from a handout.

Course Schedule July 28-August 19

Lectures: MTuWThF 1-3:00, July 28-August 15, 155 Donner Lab  
We will often run past 3:00, so please don’t schedule other things between 3:00 and 3:30.

Sections: MTuWThF 9:00-10:30, 10:30-12:00, 608-7 Evans

Final Exam: **Tuesday August 19, 9:00am-12:00pm, Location TBA**

Website: [http://emlab.berkeley.edu/users/anderson/Econ204/204index.html](http://emlab.berkeley.edu/users/anderson/Econ204/204index.html)

Course Requirements

Lectures will cover the theory; the tutorial sections will review the lectures, introduce
additional material, and discuss the weekly problem sets. All students should attend
the tutorial sections and will be responsible for the material discussed at these
sections.

There will be a total of six problem sets, due at the following times:

1. Friday 8/1 in lecture
2. Tuesday 8/5 in lecture
3. Friday 8/8 in lecture
4. Tuesday 8/12 in lecture
5. Friday 8/15 in lecture
6. Monday 8/18; turn this in to Congyan Tan by 9:00am

Students are urged to work in groups to complete the problem sets. However, you
should make a serious effort to solve each problem on your own before meeting as a
study group. Each student must turn in their own solutions, in their own handwriting
(if a student chooses to type solutions, each must type them separately). Do not
simply copy another student’s solution; make sure you understand the answer well
enough so that you can write out a solution without referring to someone else’s
answer.

Because of the importance of posting solutions and grading problem sets promptly, we
will not accept late problem sets; there will be no exceptions to this rule. Your
problem set grade will be based on the five highest grades of the problem sets you
hand in; this will allow you to miss one problem set with no penalty.

Grading

The final numerical grade for 204 will be computed as follows
20% problem sets
80% final exam 9:00am-12:00pm Tuesday August 19, Location TBA
Course Outline: In the following list of topics, references are to sections in de la Fuente. The lectures will contain some additional material related to, but not included in, the indicated sections of the text.

1. **Monday 7/28**
   1.2-1.3, begin 1.4, plus Corrections to de la Fuente handout (read 1.1 on your own)

2. **Tuesday 7/29**
   1.4 (cont.), 1.5-1.6 (read 1.7-1.8 on your own)

3. **Wednesday 7/30**
   2.1-2.3 plus Lim Sup/Lim Inf handout

4. **Thursday 7/31**
   2.4, begin 2.6 (read 2.5 on your own)

5. **Friday 8/1**
   2.6 (cont.), 2.7

6. **Monday 8/4**
   2.8

7. **Tuesday 8/5**
   2.9, 2.11 (read 2.10 on your own)

8. **Wednesday 8/6**
   3.1-3.3

9. **Thursday 8/7**
   **3.3, 3.5-6 plus Matrix Representation, Diagonalization & Quadratic Forms handouts**

10. **Friday 8/8**
    **3.6, 3.4 plus Diagonalization and Quadratic Forms handout**

11. **Monday 8/11**
    4.1-4.3 (unified treatment of the three sections)

12. **Tuesday 8/12**
    4.4, begin 5.2, plus Taylor Theorem handout (read 4.5 on your own)

13. **Wednesday 8/13**
    5.2 (continued), 5.3, 6.1.d

14. **Thursday 8/14**
    Difference and Differential Equations Handout

15. **Friday 8/15**
    Difference and Differential Equations Handout

Ω **2007-2077**
Measure Theory handout