Econ 204, Mathematical Tools for Economists, Summer/Fall 2015

Instructors

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Course Material

The course will cover Chapters 1-5 and part of Chapter 6 of *Mathematical Methods and Models for Economists* by Angel de la Fuente. Additional material will be covered from handouts. I will closely follow Chris Shannon's 204 slides/lecture notes from 2011. Any new/updated materials and problems sets will be posted in the new website.

Chris's 204 website: http://elsa.berkeley.edu/users/cshannon/e204_11.html
Haluk's 204 website: http://emlab.berkeley.edu/~hie/econ204/econ204.html

Course Schedule

The course runs from July 27 – August 19.
Lectures: MTWThF 1 – 3pm, July 27 – August 14, 213 Wheeler. (We might run past 3pm, try not to schedule anything 3-3:30pm.)
Sections: MTWThF 9 – 10:30am, 10:30am – 12noon, 597 Evans Hall.
Final Exam: Wednesday August 19, 9am – 12noon, 213 Wheeler.

Course Requirements

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

There will be a total of six problem sets, "due" according to the following schedule:

Problem set 1: due Friday July 31 in lecture
Problem set 2: due August 4 in lecture
Problem set 3: due Friday August 7 in lecture
Problem set 4: due Tuesday August 11 in lecture
Problem set 5: due Friday August 14 in lecture
Problem set 6: due Wednesday August 19 at 9am in the final exam room.

Problem sets will be graded for your feedback only. That is, the problem set grades won't be taken into consideration in computing the final course grades. Make sure you solve the assigned problem sets on time and submit them by their respective due date to receive feedback on your solutions. This is an indispensable part of preparing for the final exam.

Grading

The grade for Econ 204 will be based on the final exam only.

Prerequisites

Math 1A – 1B and Math 53 – 54, or equivalent.

Course Outline

References below are to sections in de la Fuente. Lecture notes may contain additional material not contained in the textbook.

Lecture 1 Monday July 27: dlF 1.2-1.3, begin 1.4 (see Corrections handout), Set Formation and Axiom of Choice handouts (read dlF section 1.1 on your own)

Lecture 2 Tuesday July 28: dlF 1.4, 1.5-1.6 (read 1.7-1.8 on your own)

Lecture 3 Wednesday July 29: dlF 2.1-2.3, handout on lim sup and lim inf

Lecture 4 Thursday July 30: dlF 2.4, begin 2.6 (read 2.5 on your own)

Lecture 5 Friday July 31: dlF 2.6, 2.7

Lecture 6 Monday August 3: dlF 2.8

Lecture 7 Tuesday August 4: dlF 2.9, 2.11 (read 2.10 on your own)

Lecture 8 Wednesday August 5: dlF 3.1–3.3

Lecture 9 Thursday August 6: dlF 3.3, 3.5 – 3.6 and handouts on Matrix Representation, Diagonalization and Quadratic Forms

Lecture 10 Friday August 7: dlF 3.6, 3.4, Diagonalization and Quadratic Forms

Lecture 11 Monday August 10: dlF 4.1-4.3, 4.4 and Taylor Theorem handout (read 4.5 on your own)

Lecture 12 Tuesday August 11: dlF 4.3, begin 5.2

Lecture 13 Wednesday August 12: dlF 5.2, 5.3, 6.1(d)

Lecture 14 Thursday August 13: Handout on Difference and Differential Equations

Lecture 15 Friday August 14: Handout on Difference and Differential Equations