Economics 6170 (Fall 2014)
Intermediate Mathematical Economics I

Course Outline

The course will cover selected topics in Linear Algebra, Real Analysis, and Optimization Theory.

Course Topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Subtopics</th>
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<tbody>
<tr>
<td>1. Linear Algebra</td>
<td>Vector Spaces, Matrices, Simultaneous Linear Equations, Characteristic Value Problem</td>
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<tr>
<td>2. Real Analysis</td>
<td>Elementary Real Analysis, Calculus of Several Variables, Convex Analysis</td>
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<td>3. Classical Optimization</td>
<td>Unconstrained Maximization, Constrained Maximization</td>
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<td>4. Modern Optimization</td>
<td>Concave Programming, Quasi-Concave Programming, Linear Programming</td>
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Text and Reading List

There is no text for this course. My lecture notes, titled Lectures on Mathematical Analysis for Economists, will be available (in August 2014) for purchase from the campus store, and is required reading.
Problem Sets and Exams

Problem Sets will be assigned roughly once every week on Thursdays. Written solutions should be submitted in class the following week on Thursdays. Problem sets will be graded, and will be discussed in section on Fridays. If you have questions regarding any aspect of these problem sets, you should see the TA for the course.

There will be two prelims and a final exam in this course. The date for the first prelim is Tuesday, September 23, and the date for the second prelim is Tuesday, October 28. These prelims will be in class. The final exam will be in December during the Final Exam period; the date and the room for the final exam will be announced later.

The course grade will depend on your performance in the two prelims, the final exam and the problem sets, the weights being 20% for the first prelim, 20% for the second prelim, 50% for the Final exam, and 10% for the problem sets. The first prelim will cover Topic 1 (Linear Algebra); the second prelim will cover Topic 2 (Real Analysis); the Final exam will cover the entire course material (Topics 1 - 4).

Lecture, Section and Office Hours

Lectures for this course will be on Tuesdays and Thursdays, from 2:55pm to 4:10pm, in RCK 102. Sections will meet on Fridays, from 1:25pm to 2:40pm in URH 202. The TA for the course will be conducting the sections on Fridays.

My office hours will be on Wednesdays, 2:00pm - 5:00pm (448 Uris Hall). The office hours of the TA will be announced later.

Course Information

Further information about this course will be announced in lectures or sections or posted on the following web site:

http://blackboard.cornell.edu/