

Economics 508A Course Syllabus

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Economics 508A Course Outline (Syllabus)**Instructor:** Juan Ignacio Vizcaino**Email:** jivizcaino@wustl.edu**Office:** Seigle 356**Office Hours:** by appointment via email.

Econ 508A is a 3-week course on essential mathematics (mostly optimization theory) for first year graduate students in Economics, Political Science and some of the Business disciplines.

There will be assignments for exercise. I will assign students to solve them at the beginning of the following class. At the end of the course there will be an exam. We will try to cover the following topics during the course:

1. Matrix Algebra
2. Multivariate Calculus Review
3. Convex Sets
4. Concavity and Quasiconcavity
5. The Envelope Theorem
6. Finite Dimensional Optimization: Necessary Conditions, Sufficient Conditions, and Convex Optimization.

No text book is required. Sometimes we may refer to the following books for more advanced details.

- Stokey and Lucas Recursive Methods in Economic Dynamics;
- Sundaram A First Course in Optimization Theory;
- Turkington Mathematical Tools for Economics.

This outline is tentative and may change as we go