Economics 5113
Introduction to Mathematical Economics
Winter 1999

Course Description

Economics is a quantitative discipline, and in recent decades the discourse of the profession has become substantially more precise, in the sense of utilizing formal mathematical models. This has many benefits: assumptions and lines of reasoning become completely explicit; exactly understood results can be used with confidence as a basis for more sophisticated reasoning; novel insights can be derived from the application of sophisticated mathematical methods.

The purpose of this course is to acquaint the students with the central mathematical methods utilized in the mathematical approach to economic analysis, and to show how these methods are applied in the central theories of economics. Specifically, the focus will be on optimization in the presence of constraints, emphasizing the approach derived from multivariate calculus.


Prerequisites: Economics 3101, 3102, 3103, or equiv., and Math 1251-1252, 1261, 3251, or equiv.

Course Work and Grading: There will be weekly problem sets (20%), a midterm exam (30%), and a final exam (50%).

Time and Location: 14:15-15:30 TTh, CSOM L-118
Prospectus

The course will focus on Chapters 2 through 8 of *Mathematics for Economists*. Material from Chapter 1 will be reviewed as it becomes relevant. I will be rewriting the lecture notes as we proceed, and cannot give a precise schedule at this point. I will indicate the readings for each lecture (except today’s) in advance.

**Reading for Lecture 1:** Introduction, skim Chapter 1.