

Econ 831: Mathematical Economics II

Fall 2015

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A. Objective and description

This course develops the foundations of choice, price, and general equilibrium, as needed through out doctoral studies in economics, with some mathematical rigor. Topics include choice, preference and utility; consumer demand; competitive firms; general equilibrium; and social choice and welfare. Special attention is paid to uncertainty and dynamic choice.

B. References

The main reference for the lectures is the textbook *Microeconomic Foundations I: Choice and Competitive Markets* by David M. Kreps, Princeton University Press, 2012. Another useful reference, covering many of the topics in the course and more is *Microeconomic Theory* by Mas-Colell, Winston and Green, Oxford university Press, 1995. Some problems from Kreps' textbook will be covered in practice sections; a student guide is available at <https://sites.google.com/a/stanford.edu/microfoundations1/>

C. Syllabus

Corresponding chapters from Kreps' textbook are indicated in brackets.

1. Choice, preference and utility [1,2]
2. Basics of consumer demand [3,4]
3. Uncertainty [5,6]
4. Dynamic choice [7]
5. Competitive firms [9]
midterm (exact time to be determined)
6. Classic demand theory [10,11]
7. Producer and consumer surplus [12]
8. General equilibrium: existence [13]
9. General equilibrium: efficiency and social choice [8,14]
10. General equilibrium: uncertainty and time [15]
final exam

D. Grading

Problems sets will be assigned every other week to be turned the week after. Students can skip turning one problem set without any further justification. Grading will come from the problem sets (20%), the midterm (35%) and the final exam (45%). If the grade in the final exam exceeds that in the midterm, the grade in the final exam will substitute for the midterm as well.

E. Office hours

TBD