

Economics 8101  
Fall Semester 2023, Session I  
Jan Werner

September 5 –October 20  
T., Th., 11:15 - 12:30  
BlegH 425 330

## Microeconomic Theory

This course is the first term of the required sequence in microeconomic theory for first-year graduate students in the Economics Ph.D. Program. The subject of the course are production and consumption decisions under certainty and uncertainty. We begin with the standard producer and consumer theories. We consider extensions of consumer theory to household's collective consumption decisions. We focus on methods of comparative statics: convex analysis, differentiable and algebraic methods, supermodularity. In the second part, we proceed to theories of decision making over time and under uncertainty. We discuss discounted utility, expected utility and its axiomatizations, and some alternative specification of preferences. Further, we present theories of risk aversion and risk.

A recommended text for this course is *Microeconomic Theory*, by A. MasColell, M. Whinston, and J. Green, Oxford, 1995, in particular Chapters 1-6. Extra readings on topics 4 - 7 will be announced in class.

### Course Outline:

1. Producer Theory and Methods of Convex Analysis.
2. Consumer Theory and Household Behavior.
3. Revealed Preference and Algebraic Comparative Statics.
4. Monotone Comparative Statics with Applications.
5. Choice Under Uncertainty: Expected Utility and Alternative Models.
6. Risk and Risk Aversion.
7. Intertemporal Choice: Discounted and Recursive Utilities.

### Office Hours and Course Website.

Professor's Office Hours: Monday, 2:00-3:00 p.m.  
e-mail: [jwerner@umn.edu](mailto:jwerner@umn.edu)

Course Website: **Canvas**

## **Teaching Assistant and Recitation.**

Teaching Assistant: Emin Birkan

e-mail: birka005@umn.edu

Office Hours: TBA.

Recitation Place and Time: Thursday 4:00 - 5:15 pm, BlegH 425.

## **Exams and Grades:**

There will be midterm and final exams. Midterm will be on Thursday, **September 28**, in class. Final will be on October 19 in class. Weekly homeworks will be given. **Homeworks must be handed in on time.**

Grades will be determined on students' performance on:

Homework - 20%

Midterm - 30%

Final - 50%

*or*

Homework - 20%

Final - 80%

whichever is better.

## **Incomplete Grades, Make-up Exams and Scholastic Dishonesty:**

See Department of Economics Procedures and Policies 2023-2024.

## **COVID-19 Restrictions:**

If you experience any signs of illness or have a positive COVID-19 test result, please stay at home and consult with your healthcare provider about an appropriate course of action. Up-to-date COVID-19 policy information is available on the Safe Campus page.

## **Supplementary Course Material:**

Sundaram, R. K., *A First Course in Optimization Theory*, Cambridge U. Press, 1996.

Topkis, D. M. *Supermodularity and Complementarity*, Princeton University Press, 1998.

Rockafellar, T. A., *Convex Analysis*, Princeton U. Press, 1970.

Kreps, D., *Microeconomic Foundations I: Choice and Competitive Markets*, Princeton U. Press, 2013.

Debreu, G., *Theory of Value*, Yale U. Press, 1959.

LeRoy, S. and J. Werner, *Principles of Financial Economics*, Cambridge U. Press, 2nd ed., 2014.

Diamond, P. and M. Rothschild, *Uncertainty in Economics: Readings and Exercises*, Academic Press, 1989.