

EC9602 — Microeconomics II

Winter 2021 · Tuesdays and Thursdays 10:00–12:00

<http://brunosalcedo.com/9602.html>

<https://westernuniversity.zoom.us/my/brunosalcedo>

Contact Information

- Bruno Salcedo — F10:00–12:00 · bsalcedo@uwo.ca
- Xun Chen (TA) — Office hours TBA · xche225@uwo.ca
- Include the phrase “9602” in the subject of any email that you want me to read.

Tentative Course Outline

1. *Welfare* — Pareto · Bergson-Samuelson
2. *Uncertainty* — expected utility · von Neumann-Morgestern · Wald · departures
3. *Risk* — risk aversion · stochastic dominance · portfolios · insurance · identification
4. *Games* — trees · information structures · strategic form · Kuhn’s theorem
5. *Static solution concepts* — common knowledge · rationalizability · oligopoly · Hotelling · identification · equilibrium · correlation
6. *Dynamic solution concepts* — perfection · bargaining · repeated games · reputation
7. *Information design* — obedience principle · cheap talk · Bayesian persuasion · Bayes Correlated Equilibria · market segmentation
8. *Mechanism design with transfers* — auctions · revelation principle · envelope theorem · revenue equivalence · Vickrey-Clark-Groves
9. *Mechanism design without transfers**

Recommended Reading Materials

You are responsible for reading all the lecture notes distributed in class, as well as other reading materials that will be assigned throughout the course. There are a number of good texts on Game Theory written for economists including:

- Mas-Colell, Winston, and Green (1995) *Microeconomic Theory*
- Myerson (2001) *Game Theory: Analysis of Conflict*
- Osborne and Rubinstein (1994) *A Course on Game Theory* [free]
- Fudenberg and Tirole (1991) *Game Theory*
- Gibbons (1992) *Game Theory for Applied Economists*

Assignments, Exams, and Grades

There will be problem sets most weeks, two preliminary exams and one final exam. The tentative dates for the preliminary exams are February 11 and March 18. Your final grade will be 90% times your exam average plus 10% times your problem set average. I will drop your lowest exam grade and your lowest problem set grade (even if they are zero). You are encouraged to collaborate and discuss with your classmates, but each student must write and submit an individual report for each problem set.

Prerequisites

The course has as prerequisite 9601 and 9607, or equivalent Ph.D. level microeconomics and mathematics courses. In particular, I assume that you are familiar with the concepts of rational choice, utility functions, and Pareto efficiency, and the economic and mathematical tools and sophistication required to formally state and prove the fundamental welfare theorems. I also assume that you are familiar with basic concepts from set theory, real analysis, linear algebra, and probability theory. If at any moment before or during the course you feel uncomfortable with these prerequisites, I encourage you to contact me as soon as possible so that we can determine the best course of action.

Course Description

This course is the second and final part of the Ph.D. microeconomics core sequence. It introduces some of the basic microeconomic models that are used by most economists to interpret data, build economic intuitions, guide policy decisions, and build theoretical explanations of economic phenomena. The first part deals with some of the fundamental building blocks used to describe economic *environments* from a micro perspective. The second part introduces *solution concepts* that help to make different predictions based

on different assumptions. The third and final part deals with the *design of institutions* to achieve desired outcomes. Most of the contents of the course are mathematical in nature and are taught using rigorous formal language.

Learning Outcomes

By the end of the course, you will be able to:

1. Comprehend some of the main questions and concepts in economic theory
2. Apply the fundamental concepts, models and intuitions from economic theory to make sense of observed phenomena and to guide policy decisions
3. Identify which models are best suited for which purposes
4. Read and evaluate current research papers in economic theory
5. Carry out abstract logical arguments to prove or disprove precise statements
6. Read and write in the formal language of Mathematics

Department and University Policies

- Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf
- Students under emotional/mental distress should visit http://uwo.ca/health/mental_wellbeing/ for more information and a complete list of resources on how to obtain help.
- Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are encouraged to register with Student Accessibility Services, a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both SAS and their graduate programs

(normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.