# Syllabus for Microeconomics 3 (Fall 2025)

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| **Instructor:** | Giacomo Rubbini |
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| **Office Hours:** | by appointment. |

## Classes

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| Nov 4 | 14:00–16:30 | Seminar Room |
| Nov 6 | 09:30–12:00 | Seminar Room |
| Nov 11 | 14:00–16:30 | Seminar Room |
| Nov 13 | 09:30–12:00 | Seminar Room |
| Nov 18 | 14:00–16:30 | Seminar Room |
| Nov 20 | 09:30–12:00 | Seminar Room |
| Nov 25 | 14:00–16:30 | Seminar Room |
| Nov 27 | 09:30–12:00 | Seminar Room |

## Course Objectives

This course provides a rigorous introduction to information economics and mechanism design. The course will cover classical results in the principal-agent literature and mechanism design theory, as well as some more recent developments such as information design. At the end of the course, the students should be familiar with fundamental theoretical results in the literature and with the proof techniques used to derive them.

## Course Materials

**Slides:** posted on Virtuale.
**Textbook:** The course is not based on a textbook, and no textbook is required for the course. Some useful additional references are listed at the end of the syllabus.

## Assessment

There will be four graded problem sets, which will account for 20% of the final grade. Late work will not be accepted. Working with peers is encouraged, but each student has to submit their own work.

The date of the final exam is TBD.

# Tentative Topics Outline

1. **Adverse Selection, Signaling, and Moral Hazard**

   - The Market for Lemons
   - Labor Market Signaling
   - Incentives and Moral Hazard

2. **Social Choice and Preference Aggregation**

   - Arrow's Impossibility Theorem
   - Gibbard-Satterthwaite Impossibility Theorem

3. **Mechanism Design**

   - Dominant Strategy Implementation
   - The Revelation Principle
   - Auctions as Mechanisms
   - Efficient Bilateral Trade

4. **Equilibrium Selection and Implementation Theory**

5. **Additional Topics (if time allows)**

   - Robust Mechanism Design
   - Behavioral Mechanism Design
   - Information Design
   - Market Design and Matching

# References

Reading all references is not necessary, but it may be helpful to build intuition or to check additional details about the results covered in class. I will frequently update this list to add references I think may be helpful or interesting for you.

## General

- *Microeconomic Theory*, Mas-Colell, Whinston, and Green (1995)

- *Advanced Microeconomic Theory*, Jehle and Reny (1998)

- *Welfare Economics and Social Choice Theory*, Feldman and Serrano (2006)

## On Specific Topics

- **Adverse Selection and Signaling**

    - *The Market for Lemons*, Akerlof (1970)
    - *Job Market Signaling*, Spence (1973)

- **Mechanism Design**

    - *Optimal Auction Design*, Myerson (1981)
    - *Efficient Mechanisms for Bilateral Trading*, Myerson and Satterthwaite (1983)
    - *Auction Theory*, Krishna (2010)

- **Equilibrium Selection and Implementation Theory**

    - *Implementation in differential information economies* (Postlewaite & Schmeidler, 1986)
    - *Nash Equilibrium and Welfare Optimality* (Maskin, 1977/1999)