

# Microeconomics II

## Allievi Programme – Second Term 2009

Lecturer: Esteban Jaimovich

Term: (Northern Hemisphere) Spring Semester

Office Hours: Tuesdays 4-5pm and Fridays 11-12 noon.

### Part I: Game Theory (5 Lectures + 2 Tutorials)

1. Static Games with Complete Information
  - a. Strict and Weak Strategic Dominance.
  - b. Nash Equilibrium.
  - c. Applications to the Oligopoly Theory.

*Bibliography: O & R, chapters 1 and 2.*

2. Mixed Strategies

*Bibliography: O & R, chapter 3.1; M-C, W & G, chapter 8.D*

3. Extensive Games with Complete Information

- a. Backwards induction.
- b. Subgame Perfect Equilibrium.

*Bibliography: O & R, chapter 6.1, 6.2, 6.4, 6.5*

4. Repeated Games

- a. Reputation.
- b. Bargaining Games.

*Bibliography: Gibbons, chapter 2.3; O & R, chapter 7.1, 7.2, 7.3*

### Part II: Economics of Information (7 Lectures + 2 Tutorials)

1. Introduction (1 lecture)
  - a. Types of Asymmetric Information
  - b. The Baseline Model

*Bibliography: M.S. & P.C., chapters 1 and 2.*

2. Moral Hazard (2 lectures)

- a. The Basic Principal-Agent Model – two-effort case and overview of continuous-effort case.
- b. Linear Contracts.
- c. Applications: *i*) incentives for managers, *ii*) credit rationing.

*Bibliography: M.S. & P.C., chapter 3 (except sections 3.6, 3.7 and 3.C); M-C, W & G, chapter 14.B.*

3. Adverse Selection (2 lectures)

- a. The two-type case.
- b. The market for “lemons” (market unravelling in continuous-type case)
- c. Applications: *i*) insurance markets, *ii*) credit rationing.

*Bibliography: (for 4.a and 4.c) M.S. & P.C., chapter 4 (except sections 4.4 and 4.C); (for 4.b) M-C, W & G, chapter 13.B.*

4. Signalling (2 lectures)

- a. Quick Review of Bayesian Games (Bayesian Perfect Equilibrium).
- b. Signalling games.
- c. Education choice as a Signal.

*Bibliography: (for 4.a and 4.b) Gibbons, chapter 3.1, and chapter 4.1 and 4.2.A; (for 4.c) M-C, W & G, chapter 13.C.*

## Evaluation Method

Evaluation consists in two exams: a *mid-term exam*, which corresponds to Part I of the programme; and a *final exam*, which covers the topics in Part II. The mid-term exam accounts for 40% of the final mark. The final exam accounts for the remaining 60% of the final mark.

## Additional Readings: articles published in refereed journals

We will not have time to cover this material during the course. For those students that need to increase their mark obtained during the exams (i.e., those who haven't reached the minimum mark required to keep the Allievi scholarship), I will give the chance to make a referee report on one of the following articles. According to the quality of the referee report, the final mark could be upgraded in: 0, 1, or 2 points.

- a. Incentives and Moral Hazard: Acemoglu & Zilibotti (1999), Aghion & Bolton (1997), Ghatak, Morelli & Sjostrom (2001).
- b. Adverse Selection: De Meza & Webb (2000), Ghatak (1999), Van Tassel (1999).

## Bibliography

- Osborne and Rubinstein, "A Course in Game Theory". MIT Press. 1994.
- Robert Gibbons, "A Primer in Game Theory". Princeton University Press. 1992.
- Macho Stadler and Perez Castillo, "An Introduction to the Economics of Information". Oxford University Press. 2001. 2<sup>nd</sup> edition.
- Mas-Collel, Whinston and Green, "Microeconomic Theory". Oxford University Press. 1995.
- Acemoglu D. and Zilibotti F., (1999): "Information Accumulation in Development", *Journal of Economic Growth*, 4, 5-38.
- Aghion P. and Bolton P., (1997): "A Theory of Trickle-Down Growth and Development", *Review of Economic Studies*, 64, 151-172.
- De Meza D. and Webb D., (2000): "Does Credit Rationing Imply Insufficient Lending?", *Journal of Public Economics*, 78, 215-234.
- Van Tassel E., (1999): "Group Lending under Asymmetric Information", *Journal of Development Economics*, 60, 3-25.
- Ghatak M., (1999): "Group Lending, Local Information and Peer Selection", *Journal of Development Economics*, 60, 27-50.
- Ghatak, Morelli and Sjostrom (2001): "Occupational Choice and Dynamic Incentives", *Review of Economic Studies*, 68, 781-810.

Note: Some few articles may be added during the course to the bibliography corresponding to Section 5 of Part II.