Advanced Microeconomics Part II: Game Theory

Syllabus

Prof. Dr. Uwe Jirjahn

Chair of Labor Economics
(Professur für Arbeitsmarktökonomik)

Text Books

Gibbons, Robert. 1992. *A Primer in Game Theory*. Pearson, New York.

Gintis, Herbert. 2009. *Game Theory Evolving*. Second Edition, Princeton University Press, Princeton.

Muthoo, Abhinay. 1999. *Bargaining Theory with Applications*, Cambridge University Press, Cambridge.

Course Content

Universität Trier

1. Introduction
1.1 What Is Economics? 1.2 What Is Game Theory?

2. Basic Concepts *(Gintis: Ch. 3, Ch. 4.4, Ch. 5.19; Gibbons: Ch. 1.1.A, 1.1.C, 1.3, 2.4.B)*
2.1 Normal Form and Extensive Form 2.2 Pure-Strategy Nash Equilibrium 2.3 Subgame Perfect Nash Equilibrium 2.4 Mixed-Strategy Nash Equilibrium 2.5 Some Typical Examples

3. Dominated Strategies *(Gintis: Ch. 4; Gibbons: Ch. 1.1.B, 1.1C, 2.1.A)*
3.1 Normal Form: Eliminating Dominated Strategies 3.2 Extensive Form: Backward Induction

4. Duopoly *(Gibbons: Ch. 1.2.A, 1.2.B, 1.5, 2.1.B)*
4.1 Cournot Competition 4.2 Stackelberg Leadership 4.3 Bertrand Competition with Homogeneous Products 4.4 Bertrand Competition with Differentiated Products

5. Repeated Games
5.1 Finite Time Horizon 5.2 Infinite Time Horizon

6. Bargaining *(Muthoo: Ch. 1, 2, 3)*
4.1 Symmetric Nash Bargaining Solution 4.2 Asymmetric Nash Bargaining Solution
4.3 Rubinstein Bargaining Game

7. Bayesian Games *(Gibbons: Ch. 3, 4; Gintis: Ch. 8)*
5.1 Static Bayesian Games 5.2 Dynamic Bayesian Games