

ADVANCED MICROECONOMICS

PART II: GAME THEORY

Professor Uwe Jirjahn

Online Class

Winter Semester 2021/22

COURSE CONTENT

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. Bargaining (*Muthoo: Ch. 1, 2, 3*)
 - 5.1 Symmetric Nash Bargaining Solution
 - 5.2 Asymmetric Nash Bargaining Solution
 - 5.3 Rubinstein Bargaining Game

6. Bayesian Games (*Gibbons: Ch. 3, 4; Gintis: Ch. 8*)
 - 6.1 Static Bayesian Games
 - 6.2 Dynamic Bayesian Games

TEXTBOOKS

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.