

**Introduction to Game Theory**  
**Outline and Schedule**  
**Erik G. Larsson & Lefteris Karipidis**  
Last updated on April 9<sup>th</sup>, 2009  
(to be continuously updated during the course)

**1. Introduction / Zero-sum Games (Erik)**

Time & venue: January 19<sup>th</sup>, 9:15, Glashuset

Reading: Ferguson II-1,2,3,4 (II-5,6,7 for self study)

Homework: Formulate Hazard game as LP problem and solve in MATLAB

Ferguson II – 1.5.4, 2.6.2, 2.6.6, 3.7.1, 4.7.1

**2. Nonzero-sum Games / Repeated Games (Erik)**

Time & venue: January 22<sup>nd</sup>, 13:15, Glashuset

Reading: Ferguson III-1,2 (III-3 for self-study), Owen VIII, Fudenberg 1

Homework: Ferguson III – 2.5.1, 2.5.3, 2.5.10

**3. Homework Presentations**

Time & venue: February 6<sup>th</sup>, 9:15, Glashuset

**4. Cooperative Games with Transferable Utility (Lefteris)**

Time & venue: Monday, February 23<sup>rd</sup>, 9:15, Filtret

Reading: Ferguson III-4.2, Owen IX, Myerson 8

**5. Cooperative Games with Non-transferable Utility (Lefteris)**

Time & venue: Wednesday, February 25<sup>th</sup>, 13:15, Filtret

Reading: Ferguson III-4.3, Owen IX

**6. Homework Presentations**

Time & venue: Thursday, March 5<sup>th</sup>, 15:15, Filtret

Homework: Ferguson III-4.5.1-6

**7. Differential Games (Fredrik)**

Time & venue: Monday, March 16<sup>th</sup>, 9:15, Filtret

Reading: Owen V, Ferguson II-6, Fudenberg 3

**8. Utility Theory (Johannes)**

Time & venue: Wednesday, March 18<sup>th</sup>, 9:00, Filtret

Reading: Owen VII, Ferguson Appendix 1, MacKenzie 2

**9. Extensive Form / Multistage Games (Reza)**

Time & venue: Monday, March 23<sup>rd</sup>, 9:00, Algoritmen

Reading: Ferguson II-5, Owen I.2, Fudenberg 3, Myerson 4 /

Fudenberg 5, MacKenzie 4, Myerson 7, Owen

**10. Behavioral Strategies / Incomplete Information (Chaitanya)**

Time & venue: Friday, March 27<sup>th</sup>, after LINCOMNET (around 16:30), Systemet

Reading: Owen V-VI, Fudenberg 3, 6, Myerson 10

**11. n-Person Games: Coalitional Form, Stable Sets, Shapley Value (Andreas)**

Time & venue: Wednesday, April 8<sup>th</sup>, 16:15, Algoritmen

Reading: Ferguson IV, Owen X-XII, Myerson 9

**12. Perfect Equilibrium Points / Evolutionary Stable Systems / Correlated Equilibria (Mirsad)**

Time & venue: Friday, April 24<sup>th</sup>, 15:30, Algoritmen

Reading: Owen VIII, Fudenberg 2, Myerson 5-6

**Further Topics (reading)**

- **Infinite Games** (Owen IV, Myerson 3.13, Fudenberg 1.3.3)
- **Multistage Games: Games of Exhaustion, Stochastic/Markov Games, Recursive Games** (Owen V, Ferguson II-6, Fudenberg 3)