

# Evolutionary Game Theory

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The Doctoral School of General and Quantitative Economics, Corvinus University of Budapest invites you to the mini-course

## **Evolutionary Game Theory**

lectured by

**Professor Josef Hofbauer**

The schedule:

- February 12 (Monday) 13:40-15:10, Room E.3001
- February 13 (Tuesday) 13:40-15:10, Room E.3001
- February 14 (Wednesday) 13:40-15:10, Room E.281
- February 15 (Thursday) 13:40-15:10, Room E.281
- February 15 (Thursday) 15:30-17:00, Room E.3005
- February 16 (Friday) 09:50-11:20, Room E.281

Topics (for units 1-3):

- The two basic dynamic models of evolution and learning in games: the replicator dynamics and the best response dynamics (fictitious play).
- Which Nash equilibria are stable under these dynamics?
- Evolutionarily stable strategies (ESS).
- (Coarse) correlated equilibria.

Further topics (units 4-6):

- equilibrium selection,
- games with continuous strategy spaces,
- other dynamic models.

Participation is free, no registration is required.

**Josef Hofbauer's main research interests** are dynamical systems (qualitative theory of differential equations) and their applications to biomathematics, in particular population dynamics (permanence), and evolutionary game theory. In collaboration with Karl Sigmund he published the book *The Theory of Evolution and Dynamical Systems* (Cambridge University Press 1988) which presents a unified approach to four different areas of mathematical biology (population genetics, population ecology, chemical kinetics of macromolecules, and evolutionary game dynamics) through its common basic dynamic model: the Lotka-Volterra and replicator equations. A largely revised, reorganized and updated edition appeared in May 1998 under the title *Evolutionary Games and Population Dynamics*.