

# 14.126 Teoría de juegos

## Otoño 2002

### Libros de texto

1. Fudenberg, y Tirole. *Game Theory*. The MIT Press, 1991. [Principal]
2. Osborne y Rubinstein. *A Course in Game Theory*. The MIT Press, 1994. [Principal]
3. Weibull. *Evolutionary Game Theory*. The MIT Press, 1995. [Complementario]
4. Fudenberg y Levine. *The Theory of Learning in Games*. The MIT Press, 1998. [Complementario]
5. Krishna. *Auction Theory*. Academic Press, 2002. [Complementario]

*Games and Economic Behavior* (1993-, vol. 5-) artículos descargables de la página web de la revista ScienceDirect: <http://www.apnet.com/www/journal/ga.htm>

*Journal of Economic Theory* (1993-, vol. 59-) artículos descargables de la página web de la revista ScienceDirect: <http://www.academicpress.com/jet>

Los artículos anteriores a 1997 de las secciones *Econometrica*, *Review of Economic Studies* o *Quarterly Journal of Economics* se pueden descargar de JSTOR: <http://www.jstor.org/>

### Calificación

Habrán aproximadamente 5 boletines de ejercicios (40%) y un examen final para realizar como trabajo en casa (60%).

## Resumen general

Clase 1. Teoría de la elección (Savage, 1954; Kreps, 1988)

\*Yildiz, M (2001), Material de clase

Savage, L. (1954), *The Foundations of Statistics*.

Kreps, D. (1988), *Notes on the Theory of Choice*.

Clases 2 y 3 Introducción. Definiciones (Equilibrio Nash, perfecto, secuencial, racionalizabilidad, equilibrio correlacionado, inducción hacia atrás y hacia adelante, racionalidad secuencial, equilibrios autoconfirmados)

\*Fudenberg y Tirole, Caps. 1,2 y 3.

Osborne y Rubinstein Caps. 2,3,4 y 6.

Aumann, R. (1995) "Backward Induction and Common Knowledge of Rationality," *Games and Economic Behavior*, 8, 6-19

Ben-Porath, E. (1997) "Rationality, Nash Equilibrium and Backward Induction in Perfect Information Games," *Review of Economic Studies*, 64, 23-46.

Brandenburger, A. (2001): "The Power of Paradox".

Aumann, R. y A. Brandenburger (1995) "Epistemic Conditions for Nash Equilibrium," *Econometrica*, 63, 1161-1180.

Bernheim, D. (1984) "Rationalizable Strategic Behavior," *Econometrica*, 52, 1007-1028.

Pearce, D. (1984) "Rationalizable Strategic Behavior and the Problem of Perfection," *Econometrica*, 52, 1029-1050.

Aumann, R. (1987) "Correlated Equilibrium as an Expression of Bayesian Rationality," *Econometrica*, 55, 1-18.

Kreps y Wilson (1982) "Sequential Equilibria," *Econometrica*, 50, 863-894.

Dekel, E., D. Fudenberg y D. Levine (1999), "Payoff Information and Self-Confirming Equilibrium," documento de trabajo.

<http://levine.sscnet.ucla.edu/papers/ack32rc.pdf>

Fudenberg, D. y D. Kreps (1995), "Learning in Extensive Games, I: Self-Confirming Equilibrium," *Games and Economic Behavior*, 8, 20-55.

## Clases 4 y 5. Juegos repetidos

\*Fudenberg y Tirole, Cap. 5.

Osborne y Rubinstein Cap. 8.

Abreu, D., P. K. Dutta, y L. Smith (1994), "Folk Theorems for Repeated Games: A NEU Condition," *Econometrica* 62, 939-948.

Fudenberg, D. y E. Maskin (1986), "The Folk Theorem for Repeated Games with Discounting and Incomplete Information," *Econometrica* 54, 533-54.

Fudenberg, D., D. Levine, y E. Maskin (1994), "The Folk Theorem in Repeated Games with Imperfect Public Information," *Econometrica* 62, 997-1039.

Fudenberg, D., D. M. Kreps, y E. Maskin (1990), "Repeated Games with Long-run and Short-run Players," *Review of Economic Studies* 57, 555-573.

Kandori, M. (1992), "Social Norms and Community Enforcement," *Review of Economic Studies* 59, 63-80

## Clase 6. Repaso

## Clase 7. Juegos con parloteo (*Cheap Talk*)

\*Crawford, V y J. Sobel (1982) "Strategic Information Transmission," *Econometrica*, 50, 1431\_1451.

\*Myerson, R. (1986) "Multi-Stage Games with Communication," *Econometrica*, 54, 323-358.

Battaglini, M. (2002), "Multiple Referrals and Multidimensional Cheap Talk," *Econometrica*, 70, 1379-1401.

## Clases 8 y 9. Teoría de la negociación

\*Osborne y Rubinstein, Caps 7 y 15.

\*Yildiz, M. (2001): "Bargaining without a common prior – An immediate agreement theorem"

Fudenberg y Tirole, Cap. 10

Rubinstein, A. (1982) "Perfect Equilibrium in a Bargaining Model," *Econometrica*, 50, 97-109.

Nash, J. (1950), "The bargaining problem," *Econometrica*, 18.

#### Clase 10. Señalización, reputación

Fudenberg y Tirole, Cap 9.

\*Cho, I.-K. y D. Kreps (1987) "Signalling Games and Stable Equilibria," *Quarterly Journal of Economics*, 102, 179-221.

\*Kreps, D. y R. Wilson (1982) "Reputation and Imperfect Information," *Journal of Economic Theory*, 27, 253-279.

\*Milgrom y Roberts (1982), "Predation, reputation and entry deterrence," *Journal of Economic Theory*, 27, 280-312.

\*Kreps, D., P. Milgrom, J. Roberts y R. Wilson (1982) "Rational Cooperation in the Finitely Repeated Prisoners' Dilemma," *Journal of Economic Theory*, 27, 245-52.

#### Clase 11 y 12. Fundamentos epistemológicos

Fudenberg y Tirole Chaps 2-14.

\*Yildiz, *Lecture Notes*

\*Aumann (1995), *Interactive Epistemology*.

\*Dekel, E. y F. Gul (1997) "Rationality and Knowledge in Game Theory," in *Advances in Economics and Econometrics: Theory and Applications*, D. M. Kreps and K. F. Wallis eds., Cambridge University Press, 1997.

Milgrom, P. y N. Stokey (1982) "Information, Trade and Common Knowledge," *Journal of Economic Theory*, 26, 177-227.

#### Clase 13. Repaso

#### Clases 14, 15, 16 y 17. Aprendizaje y evolución

\*Weibull, capítulos 2-3.

\*Fudenberg y Levine, capítulos por determinar.

Erev, I. y A. Roth (1995) "On the Need for Low-Rationality Game Theory," <http://www.economics.harvard.edu/~aroth/>

\*Noldeke, G. y L. Samuelson (1993) "An Evolutionary Analysis of Forward and Backward Induction," *Games and Economic Behavior*, 5, 425-454.

Kandori, M., G. Mailath y R. Rob (1993) "Learning, Mutation, and Long-run Equilibria in Games," *Econometrica*, 61, 29-56.

Young, P. (1993) "The Evolution of Conventions," *Econometrica*, 61, 57-84.

Ellison, G. (1993) "Learning, Local Interaction and Coordination," *Econometrica*, 61, 1047-1071.

Fudenberg, D. y D. Kreps (1995) "Learning in Extensive Games, I: Self-Confirming Equilibria," *Games and Economic Behavior*, 8, 20-55.

Clase 18. Repaso

Clase 19. Juegos supermodulares

\*Milgrom, P. y J. Roberts (1990) "Rationalizability and Learning in Games with Strategic Complementarities," *Econometrica*, 58, 1255-1277.

\*Milgrom, P. y J. Roberts (1996), "The LeChatelier Principle", *The American Economic Review*, Vol. 86, No. 1. (Mar., 1996), pp. 173-179.

Vives, X. (1990) "Nash Equilibrium with Strategic Complementarities," *Journal of Mathematical Economics*, 19, 305-321

Topkis, D. M. (1998) *Supermodularity and Complementarity*, Princeton.

Clases 20, 21 y 22. Subastas

\*Krishna, Caps. 2,3,5-7,10 y 17.

\*Myerson, R. (1981), "Optimal Auction Design," *Mathematics of Operations Research* 6, pp. 58-73.

\*Milgrom, P. y R. Weber (1982), "A Theory of Auctions and Competitive Bidding," *Econometrica* 50, 1089-1122.

Clase 23. Repaso