

Advanced Microeconomic Policy Analysis II

API-110

Preliminary Course Syllabus

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API-110 is the second half of the two-semester sequence in advanced microeconomic analysis for MPA/ID students. The aim of this course is to further equip students with tools of modern microeconomic theory helpful in analyzing issues in international development. Topics covered will include game theory, the economics of information, contract theory, general equilibrium and welfare economics.

The course meets twice a week for lecture:

Tuesday and Thursday 8:40 – 10:00 am L-140

There will be two review sessions offered on Fridays by the Teaching Fellow:

Review Sections: Friday 8:40-10:00 am and 10:10 – 11:30 am in L-280

In addition, course assistants will hold weekly office hours to help with the homework and other basic questions. Students are encouraged to consult the Teaching Fellow or me for more advanced questions.

Note the following exceptions:

Make-Up Class: Friday, January 30, 1:00-2:30pm, Land Hall (no TF reviews that day)

No class: Thursday, February 26

Mid-term Review: Friday March 13, 4:10-5:30pm, L140 (no TF reviews that day)

Time Change: Tuesday, March 17 - no class at 8:40am, instead TF Mid-term Reviews (only need to attend one) at:

(A) 1:00-2:30pm in L140 (in API-119's regular class time) OR

(B) 4:00-6:00pm in L230.

Office Hours: I will have office hours each Wednesday from 5-7pm unless otherwise noted. There will be a sign-up sheet outside my office door. Students are encouraged to sign up either in small groups or alone. If you are unable to attend my office hours or they are full, please contact my assistant for a different time.

Prerequisites: API-109 or its equivalent. For equivalent courses, the same pre-requisites as in API-109 apply.

Grading:

Grades for the course will be assigned based on:

Problem Sets	10%
Midterm	30%
Final	60%

Problem Sets: There will be a total of 9 Problem sets assigned generally every week (usually on a Tuesday and due back on the Tuesday a week later). Problem sets should be turned in anytime *before 4pm on the due-date* in the course box. They will be removed by 4:10pm and problem sets turned in after that will be considered late and will not receive any credit. In rare cases, exceptions may be made if arranged with me in advance.

Examinations: There will be a midterm examination given on **Thursday, March 19th, 2009** and the final examination will be given on **Friday, May 22nd, 2009** from 9am-noon.

Teaching Fellow:

Clara Zverina clara_zverina@ksgphd.harvard.edu

Course Assistants:

Hannah Bowen hannah_bowen@ksg09.harvard.edu
Adam Lyons adam_lyons@ksg08.harvard.edu
Andres Mitnik andres_mitnik@ksg09.harvard.edu

Readings:

In addition to the texts used in API-109 (MWG in particular), the following are required for this course:

Game Theory for Applied Economists by Robert Gibbons (G), Princeton University Press, 1992.

The Economics of Contracts by Bernard Salanie (S), MIT Press, 1999. The texts are available at the Harvard Coop and are placed on reserve at the KSG library.

The students may also want to consult the following optional texts placed at the KSG library reserve:

- Fudenberg, Drew *Game Theory* 1991
- Kreps, David *Game Theory and Economic Modeling* 1990
- Dutta, P. *Strategies and Games* 1999
- Rasmusen, E. *Games and Information: An Introduction to Creative Theory* 2001
- Hart, O. *Firms, Contracts and Financial Structure* 1995
- Kreps, David. *A Course in Microeconomic Theory* 1990
- Varian, H. *Microeconomic Analysis* 1992
- Basu, K. *Analytic Development Economics* 1998
- Ray, Debraj. *Development Economics* 1998
- Bardhan, P and C. Udry. *Development Microeconomics* 1999
- Meier, G and Stiglitz. *Frontier of Development Economics: The Future in Perspective* 2001

Tentative Schedule

(subject to change)

I. General Equilibrium (GE)**Lecture 1:**

- Introduction, and Course Overview
- Recall: Pure Exchange Economy (MWG 15.B)
- 1x1 Economy (1 Consumer, 1 Producer) (MWG 15.C)

Lectures 2-3:

- 2x2 Production Economy (2 Goods, 2 Factors)
International Trade (MWG 15.D)

* Murphy, K; Sleifer, A and Vishny, R 1989. "Industrialization and the Big Push," *Journal of Political Economy* 97, p 1003-26 (JSTOR)

Basu, K and Van, H. 1998. "The Economics of Child Labor," *American Economic Review*, Vol. 88, No. 3, p. 412-427. (JSTOR)

II. Game theory**Lecture 4:**

- Formal Description of Games (MWG 7.B)
- Playing Games

II.A. Static Games of Complete Information**Lecture 5:**

- Normal Form Representation (G 1.1.A)
- Dominant Strategies, Iterated Elimination (G 1.1.B, MWG 8.B)
- Nash Equilibrium (NE) (G 1.1.C, Appendix 1.1.C, MWG 8.D)

* Hardin, G. 1968. "The Tragedy of the Commons." *Science* 162: 1243-48 (JSTOR)

Lecture 6:

Applications of NE

- Bertrand Competition (G 1.2.B, MWG 12.C)
- Cournot Competition (G 1.2.A, MWG 12.C)
- Tragedy of the Commons (G 1.2.D)
- Team Production

* Holmstrom, B. 1982. "Moral Hazard in Teams," *Bell Journal of Economics*, Vol. 13, No. 2. p. 324-340. (JSTOR)

Lectures 7-8:

- Mixed Strategies (G 1.3.A)
- NE existence (G 1.3.B)

* Powell, Andrew. "Argentina's Avoidable Crisis: Bad Luck, Bad Economics, Bad Politics, Bad Advice," p. 1-58 in *Brookings Trade Forum*, 2002 Ed., Susan Collins.

II.B. Dynamic Games of Complete Information

Lecture 9:

- Perfect Information Games, Backward Induction (G 2.1.A)
- Extensive & Normal Form Representation (G 2.4.A, MWG 7.C-D)
- Randomization (MWG 7.E)

Lecture 10:

- Subgame Perfect Nash Equilibrium (SPNE) (G 2.4.B, MWG 9.A-B)
- Stackleberg Competition (G 2.1.B)
- Bank Runs (G 2.2.B)

Diamond, D. and Dybvig, P. 1983. "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy*, Vol. 91, No. 3., p. 401-419. (JSTOR)

Lecture 11:

- Repeated Games (G 2.3.A, MWG 12.D)
- Infinitely Repeated Games, Folk Theorem (G 2.3.B&Appendix, MWG 12.Appendix A)

* Cardenas, Juan-Camilo, Forthcoming. "Wealth Inequality and Overexploitation of the Commons. Field Experiments in Colombia". p 205-233 in "Inequality, Collective Action and Environmental sustainability", editors, Jean-Marie Baland, Pranab Bardhan and Samuel Bowles. Princeton University Press.

Online version available at:

<http://www.santafe.edu/research/publications/workingpapers/02-08-033.pdf>

Lecture 12:

- Group-Lending, Guilds/Coalitions

Besley, T and Coate, S. 1995. "Group lending, repayment incentives and social collateral," *Journal of Development Economics*, Vol. 46(1) p 1-18. (HOLLIS)

Greif, A; Milgrom, P and Weingast, B. 1994. "Coordination, Commitment, and Enforcement: The Case of the Merchant Guild," *Journal of Political Economy*, Vol. 102, No. 4. p. 745-776. (JSTOR)

Greif, A. 1993. "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition," *American Economic Review*, Vol. 83, No. 3. p. 525-548. (JSTOR)

Lecture 13:

- Aside – Experimental/Behavioral Game Theory

Camerer, C. 1997. "Progress in Behavioral Game Theory," *Journal of Economic Perspectives*, Vol. 11, No. 4. p. 167-188. (JSTOR)

Rabin, M. 1993. "Incorporating Fairness into Game Theory and Economics," *American Economic Review*, Vol. 83, No. 5, p. 1281-1302. (JSTOR)

Lecture 14:

- Mid-term Review

Midterm (in class) – March 19 (Thursday)

II.C. Static Games of Incomplete Information

Lecture 15:

- Static Bayesian Games (G 3.1.A-B, MWG 8.E)
- Bayesian Nash Equilibrium (BNE) (G 3.1.C, MWG 8.E)
- BNE Applications (G 3.2.A, MWG 8.E)

* Palfrey, Thomas R., and Howard Rosenthal (1985). "Voter Participation and Strategic Uncertainty." *The American Political Science Review* 79, 62-78.

II.D. Dynamic Games of Incomplete Information

Lecture 16:

- Perfect Bayesian Equilibrium (PBE) (G 4.1, MWG 9.C)

Banerjee, A. 1992. "A Simple Model of Herd Behavior," *Quarterly Journal of Economics*, Vol. 107, No. 3, p. 797-817. (JSTOR)

Miller, N. 1997. "Efficiency in Partnerships with Joint Monitoring," *Journal of Economic Theory*, Vol. 77, No. 2, p. 285-299. (HOLLIS)

Lecture 17:

- Signalling (G 4.2.A)
- Signalling Application: Job-Market (G 4.2.B, S 4.2, MWG 13.C)

* Rodrik, Dani. 1998. "Promises, Promises: Credible Policy Reform via Signalling." *The Economic Journal* 99, Sep 1989 and in Federico Sturzenegger and Mariano Tommasi eds. *The Political Economy of Reform*. Cambridge, MA: the MIT Press.

III. Economics of Information & Contract Theory

Lecture 18:

- Introduction: hidden information, hidden action, Principal-Agent framework (S 1, MWG 13.A, 14.A)
- Screening/Adverse Selection (S 2.1-2, MWG 14.C)

Akerlof, G. 1970. "The Market for "Lemons": Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics*, Vol. 84, No. 3, p. 488-500. (JSTOR)

Lecture 19:

- Screening Application: A Model of Red-Tape

* Banerjee, A. 1997. "A Theory of Misgovernance," *Quarterly Journal of Economics*, Vol. 112(4), p. 1289-1332. (COPY?)

Stiglitz, J and Weiss, A. 1981. "Credit Rationing in Markets with Imperfect Information," *American Economic Review*, Vol. 71, No. 3, p. 393-410. (JSTOR)

Lectures 20-1:

- Moral Hazard (MH) (S 5.1-2, MWG 14.B)
- MH Application: Share-cropping

* Ghatak, M and T. Guinnane “The Economics of Lending with Joint Liability : Theory and Practice. *Journal of Development Economics*, Vol.60, No.1, Oct. 1999. See Corrections to paper, *Journal of Development Economics*, Vol.69, No.1, Oct. 2002.

Eswaran, M and Kotwal, K 1985. “A Theory of Contractual Structure in Agriculture,” *American Economic Review*, Vol. 75(3), p. 352-366 (JSTOR)

Eswaran, M and Kotwal, K. “A Theory of Two-Tier Labor Markets in Agrarian Economies,” *American Economic Review*, Vol. 75, No. 1. (Mar., 1985), pp. 162-177. (JSTOR)

Foster, A and M. Rosenzweig, “A Test for Moral Hazard in the Labor Market: Contractual Arrangements, Efficiency and Health,” *Review of Economics and Statistics*, Vol. 76, 1994, pp. 213-27. (HOLLIS)

Otsuka, K, H. Chuma, and Y. Hayami, “Land and Labor Contracts in Agrarian Economies,” *Journal of Economic Literature* 30, December 1992, 1965-2018. (HOLLIS)

Lectures 22-3:

- Dynamic complete contracts - overview (S 6.1, 6.4.5, 6.5 conclusion only)
- Incomplete Contracts (S 7.1)
- Property Rights, Theory of the Firm (S 7.2)
- Incomplete Contracts - Application (S 6.1, 6.4.5, 6.5 conclusion only)

Holmstrom, B and Roberts, J. 1998. “The Boundaries of the Firm Revisited,” *Journal of Economic Perspectives*, Vol. 12, No. 4. p. 73-94. (JSTOR)

Besley, T and Ghatak, M 2001. “Government versus Private Ownership of Public Goods,” *Quarterly Journal of Economics*, Vol. 116, No. 4, p.1343 – 1372

Lecture 24:

- Final Review, Endnotes