

8/19/08

**Stern School of Business  
New York University**

*Course Outline and Reading List*  
(Subject to change)

**Microeconomics: Theory and Applications**

*B30.3335.01*

*3 credits. Ph.D. core course. Fall 2008*

*Wednesdays, 9 a.m. - noon, KMC 8-191.*

*Prof. Roy Radner*

This course satisfies the core requirement in microeconomic theory for Stern doctoral students, and is especially designed for those whose programs do not include advanced courses in economic theory. It emphasizes concepts and techniques of microeconomic analysis that are likely to be useful in the students' doctoral dissertation research. We examine a number of research issues in accounting, finance, information systems, management, and marketing (and possibly other areas, depending on the students enrolled), and in each case we explore the relevant microeconomic theory.

**Textbook:** R. Preston McAfee (2006), *Introduction to Economic Analysis*, <http://intro.mcafee.cc>, cited in the syllabus as RPM, with section numbers. This is an "open access" publication, which can be downloaded from the indicated website without charge. In past years I have used Varian (2003). References to this textbook are also given in the syllabus, as "Supplementary Readings" (Suppl.), and are cited as HRV. For a more advanced treatment, see (MasColell et al, 1995). For a more complete introduction to game theory, see (Dutta, 1999).

Notes:

1. The research articles listed in the outline are illustrative. Some may not be assigned for thorough study, and are designated "Suppl." Most of the published articles can be downloaded using JSTOR. I shall make arrangements to make the others available. Other references may be added during the semester.
2. The textbook will be supplemented by notes to be distributed (denoted by RR).
3. The course grade will be based on homework exercises (35%), a midterm examination (25%), and a final examination (40%).

**Outline**

**1. Market Demand and Elasticity.** Tyagi, 1999; RPM, 1, 2.1.1, 2.4.1, 6.5.1-3. Suppl: HRV, Ch. 1, Ch. 15, Ch. 24 ((pp. 419-425).

**2. Pricing and Surplus.** Bakos and Brynjolfsson, 1999; RR, Notes on Welfare. Suppl: HRV, Ch. 14 (225-254);

- 3. Competitive Equilibrium.** RPM, 2.1.2, 2.2-5; RR, Notes on Welfare. Suppl: Bakos and Brynjolfsson, 2000; HRV, Ch. 16.
- 4. Production, Cost, and Productivity.** Brynjolfsson and Hitt, 1996; RPM, 4.1. Suppl: Brynjolfsson, Hitt, and Yang, 2002; HRV, Chs. 18-22.
- 5. Game Theory.** Dewan *et al*, 1995; RR, Notes on Noncooperative Game Theory, Sec. 2; RPM, 7.1. Suppl: RR, Notes on Cournot Equilibrium; Radner, 2001; HRV, Ch. 28.
- 6. Oligopoly.** Jing, 2006; RPM, 7.2, 7.4. Suppl: HRV Ch. 27; Moorthy, 1988.
- 7. Agency and Compensation.** Basu *et al*, 1985; Pfeffer, 1998; RR, Notes on Noncooperative Equilibrium, Sec. 3; Radner, 1987, Sections 4, 6 – 8; RPM, 7.5 through 7.5.2. Suppl: Pearce *et al*, 1985; Lal and Srinivasan, 1993; HRV, Ch. 36.
- 8. Choice under Uncertainty and the Value of Information.** Connolly and Thorn, 1987; Marschak and Radner, 1972, Chs. 1,2. Suppl: HRV, Ch. 12; Radner and Stiglitz, 1983.
- 9. Games with Incomplete Information.** Radner. 1987, Sec. 5; RR, Notes on Noncooperative Equilibrium, Sec. 4; Radner, 1987, Sec. 5; RPM, 6.6.
- 10. Neoclassical Consumer Choice.** RPM, 5.1; RR, Notes on Welfare, Sec. 3. Suppl: HRV, Chs. 2-6; Stapleton and Subrahmanyam (1978).
- 11. Stochastic Choice.** Guadagni *et al*, 1983; McFadden, 1986.
- 12. Motivation, Perception, and Rationality.** Stevens and Fiske, 1995; Prelec and Loewenstein, 1998; McFadden, 1999; Radner, 2000; Radner and Sundararajan, 2005. .

### References

- Bakos, Y., and E. Brynjolfsson (1999), "Bundling Information Goods: Pricing, Profits, and Efficiency," *Management Science*, 45, 1613-1630.
- Bakos, Y., and E. Brynjolfsson (2000), "Bundling and Competition on the Internet," *Marketing Science*, 19, 63-82.
- Basu, A. K., *et al* (1985), Salesforce Compensation Plans: An Agency Theoretic Perspective," *Marketing Science*, 4, 267-291.
- Brynjolfsson, E., and L. M. Hitt (1996), "Productivity, Business Profitability, and Consumer Surplus: Three Different Measures of Information Technology Value," *MIS Quarterly*, June 1996, 121-142.
- Brynjolfsson, Erik, Lorin M. Hitt, and Shinkyu Yang (2002), "Intangible Assets: Computers and Organizational Capital," *Brookings Papers on Economic Activity*, I:2002, pp. 137-198.

- Connolly, T., and B. K. Thorn (1987), "Predecisional Information Acquisition: Effects of Task Variables on Suboptimal Research Strategies," *Organizational Behavior and Human Decision Processes*, 39, 397-416.
- Dewan, Rajiv, Abraham Seidman, and Shankar Sundaresan (1995), "Strategic Choices in IS Infrastructure," *Proc. of the 16<sup>th</sup> International Conference on Information Systems*, Amsterdam, Dec. 10-13, 1995, pp. 97-107.
- Dutta, Prajit K. (1999), *Strategies and Games: Theory and Practice*, MIT Press, Cambridge, MA.
- Guadagni, P. M., and J. D. C. Little (1983), "A Logit Model of Brand Choice Calibrated on Scanner Data," *Marketing Science*, 2, 203-238.
- Jing, B. (2006), "On the Profitability of Firms in a Differentiated Industry," *Marketing Science*, 25, 248-259.
- Lal, R., and V. Srinivasan (1993), "Compensation Plans for Single- and Multi-Product Salesforces: An Application of the Holmstrom-Milgrom Model," *Management Science*, 39, 777-793.
- Marschak, Jacob, and R. Radner (1972), *Economic Theory of Teams*, Yale University Press, New Haven.
- Mas-Colell, A., M. D. Whinston, and J. R. Green (1995), *Microeconomic Theory*, Oxford University Press, New York.
- McAfee, R. Preston (2006), *Introduction to Economic Analysis*, <http://intro.mcafee.cc>.
- McFadden, D. (1986), "The Choice Theory Approach to Market Research," *Marketing Science*, 5, 275-297.
- McFadden, D. (1999), "Rationality for Economists?," *J. of Risk and Uncertainty*, 19, 73-105.
- Moorthy, S. (1988), "Product and Price Competition in a Duopoly," *Marketing Science*, 7, 161-68
- Pearce, J. L., W. B. Stevenson, and J. L. Perry (1985), "Managerial Compensation Based on Organizational Performance: A Time-Series Analysis of the Effects of Merit Pay," *Academy of Management J.*, 26, 261-278.
- Pfeffer, J. (1998), "Six Dangerous Myths about Pay," *Harvard Business Review*, May-June, 1998, 109-119 .
- Prelec, D., and G. Loewenstein (1998), "The Red and the Black: Mental Accounting of Savings and Debt," *Marketing Science*, 17, 4-28.
- Radner, R. (1987), "Decentralization and Incentives," in T. Groves, R. Radner, and S. Reiter, eds. *Information, Incentives, and Economic Mechanisms*, U. of Minn. Press, Minneapolis.
- Radner, R. (2000), "Costly and Bounded Rationality in Individual and Team Decision-Making," *Industrial and Corporate Change*, v.9, no. 4, 623-658.

Radner, R. (2001), "On the Core of a Cartel," in G. Debreu, W. Neuefeind, and W. Trockel, eds., *Economics Essays*, Springer, Berlin, pp. 315-331.

Radner, R. (2003), "Viscous Demand," *J. of Economic Theory*, 112, 189-231.

Radner, R., and J. E. Stiglitz (1983), "A Nonconcavity in the Value of Information," in M. Boyer and R. E. Kihlstrom, eds., *Bayesian Models in Economic Theory*, North-Holland, Amsterdam, 1983, pp. 33-52.

Radner, R. and A. Sundararajan (2006), "Dynamic Pricing of Network Goods with Boundedly Rational Consumers" (unpublished working paper, NYU).

Stapleton, R., C., and M. G. Subrahmanyam (1978), "A Multiperiod Equilibrium Asset Pricing Model," *Econometrica*, 46, 1077-1096.

Stevens, L. E., and S. T. Fiske (1995), "Motivation and Cognition in Social Life: A Social Survival Perspective," *Social Cognition*, 13, 189-214.

Tyagi, R. K. (1999), "A Characterization of Retailer Response to Manufacturer Trade Deals," *J. of Marketing Research*, 36, 510-516.

Varian, H. R. (2003), *Intermediate Microeconomic Theory: A Modern Approach*, W. W. Norton, New York, 2003, 6<sup>th</sup> edition.