ARE 202A: Introduction to Applied Microeconomic Theory

Course Objectives

1. Reinforce and apply critical microeconomic theory tools and concepts
2. Introduce students to the practice of applied research in economics
3. Enable students to appreciate the purpose of the abstract theory covered in the core microeconomic theory classes and to apply it to consumer and producer behavior
4. Stimulate and accelerate the process of conceiving a dissertation research topic

Connections to Other Parts of the Program

1. Applies the theory covered concurrently in 200A and the mathematical tools covered in Math Camp.
2. A broad understanding of the research process prepares students to succeed in all aspects of the program.

Topic Outline

Topics 1 and 2 below are not meant to be taught sequentially; rather they may be developed simultaneously throughout the course.

1. Modeling Consumer, Producer, and Household Behavior
    a. Review and application of mathematical tools: first and second order conditions, concavity/convexity, implicit function theorem, comparative statics, constrained optimization, homogeneity
    b. Models of the consumer: applications of consumer demand, household labor supply, duality
    c. Models of the competitive firm: applications of firm input demand and output supply, economies of scale
    d. Household models: applications of simultaneous consumption and production decisions of farm households
2. Introduction to Applied Microeconomic Research Methods
    a. Introduction to applied research: expectations/reality for graduate school
    b. Conceiving research: sources of ideas, characteristics of researchable projects
    c. Modeling strategies: abstraction, tradeoffs between complex reality and analytical clarity, testable hypotheses
    d. Quality research: examples of theoretical, empirical, and synthesis papers

Sample Readings

This list provides an example of an appropriate set of readings. The precise reading list in any particular offering of the course will vary depending on the interests and expertise of the instructor. The relevant topic for each reading is noted in parentheses.

1. Modeling Consumer, Producer, and Household Behavior

    Books

    Deaton, Angus and John Muellbauer. 1999, Economics and Consumer Behavior, Cambridge University Press. Ch 10-11. (Topic 1B)

Simon, Carl and Lawrence Blume, 1994. Mathematics for Economists, Norton & Co. Ch 15, 19.2, (Topic 1A)

Papers

Becker, Gary, 1965, "A Theory of the Allocation of Time," Economic Journal, 75: 493-517. (Topic 1B)

Nerlove, Marc, 1963, "Returns to Scale in Electricity Supply", in Carl Christ (ed.), Measurement in Economics: Studies in Honor of Yehudi Grunfeld, Stanford, Stanford Univ. Press. (Topic 1C)

Craig, Ben and John Pencavel, 1994. "The Empirical Performance of Orthodox Models of the Firm: Conventional Firms and Worker Cooperatives", Journal of Political Economy, 102(4): 718-744 (Topic 1C)

Renkow, Mitch, 1990, "Household Inventories and Marketed Surplus in Semi-subsistence Agriculture", American Journal of Agricultural Economics, 72(3): 664-675. (Topic 1D)

Taylor, J. Edward and Irma Adelman, 2003, "Agricultural Household Models: Genesis, Evolution and Extensions". Review of Economics of the Household, 1(1-2): 33-58 (Topic 1D)

2. Introduction to Applied Microeconomic Research Methods

Books

Medema, Steven and Warren Samuels, 1996, Foundations of Research in Economics: How Do Economists Do Economics? Edward Elgar Press, Northhampton MA. (Topic 2A)

Schelling, Thomas 2006. Micromotives and Macrobehavior. W.W. Norton and Co., N.Y. (Topics 2B, 2C)

Thompson, William, 2001, A Guide for the Young Economist: Writing and Speaking Effectively About Economics. MIT Press, Cambridge, MA. (Topic 2A)

Papers

Akerlof, George, 1970, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism". Quarterly Journal of Economics 84(3): 488–500 (Topic 2D)

Card, David and Alan Krueger, 1993, "Minimum Wages and Employment: A Case Study of the Fast Food Industry in New Jersey and Pennsylvania", American Economic Review, 84(2): 772-793. (Topic 2D)

Fogel, Robert, 1994, "Economic Growth, Population Theory, and Physiology: The Bearing of Long-Term Processes on the Making of Economic Policy", American Economic Review, 84(3): 369-395. (Topic 2D)

Hansen, Zeynep and Gary Libecap, 2004, "Small Farms, Externalities, and the Dust Bowl of the 1930s", Journal of Political Economy 112(3): 665-694. (Topic 2D)

Hotelling, Harold, 1929, "Stability in Competition", Economic Journal, 39: 41-57. (Topic 2D)

Peltzman, Sam, 1975, "The Effects of Automobile Safety Regulation", Journal of Political Economy, 83(4): 677-725. (Topic 2D)

ARE 202B: Modeling Supply and Demand

Course Objectives

1. Develop the ability to take an analytic microeconomic model, solve it mathematically, and draw implications
2. Strengthen students' mathematical and logical reasoning skills
3. Enable students to appreciate the purpose of the abstract theory covered in the core microeconomic theory classes and to apply it to markets in agriculture, economic development, the environment and natural resources
4. Stimulate and accelerate the process of conceiving a dissertation research topic

Connection to Other Parts of the Program

1. Applies the microeconomic theory knowledge built in Math Camp and 200A, and taught concurrently in 200B
2. Builds on 202A by further emphasizing model analytics
3. May provide some applications of the econometric tools covered in 239 and 240A
4. Provides a foundation for all field courses that use analytic microeconomic modeling. Also provides a foundation for dissertation research, which in many cases involves analytic modeling.

Topic Outline

The course applies microeconomic theory to the study of markets, risk, and policy. It emphasizes analytical techniques.

1. Microeconomics of Markets
   a. Consumer Demand Analysis: homotheticity, homogeneity, functional forms, duality
   b. Production and Supply: competitive industry, non-competitive industry
   c. Market Equilibrium: equilibrium displacement models, multi-market models
2. Decisions Under Uncertainty
3. Microeconomic Policy: farm policy, trade policy, environmental policy

Sample Readings

This list provides an example of an appropriate set of readings. The precise reading list in any particular offering of the course will vary depending on the interests and expertise of the instructor.

Appelbaum, E. (1979). "Testing Price Taking Behavior", Journal of Econometrics, 9(3):283-294. (Topic 1B)

Bhagwati, J. N. and Srinivasan, T. N. (1969). "Optimal Intervention to Achieve Non-Economic Objectives", Review of Economic Studies, 36(1):27-38. (Topic 3)

Braulke, M. (1984). "The Firm in "Short-Run" Industry Equilibrium: Comment", American Economic Review, 74(4):750-753. (Topic 1B)

Carlton, D. W. and Loury, G. C. (1980). "The Limitations of Pigouvian Taxes as a Long-Run Remedy for Externalities", Quarterly Journal of Economics, 95(3):559-566. (Topic 3)

Corden, W. M. (1957). "Tariffs, Subsidies and the Terms of Trade", Economica, 24(95):235-242. (Topic 3)

Costello, C., Springborn, M., McAusland, C., and Solow, A. (2007). "Unintended Biological Invasions: Does Risk Vary by Trading Partner?" Journal of Environmental Economics and Management, 54:262-276. (Topic 3)

Deaton, A. and J. Muellbauer. 1999. Economics and Consumer Behavior. Cambridge University Press. Ch 5-6. (Topic 1A)

Floyd, J. E. (1965). "The Effects of Farm Price Supports on the Returns to Land and Labor in Agriculture", Journal of Political Economy, 73(2):148-158. (Topic 3)

Fulton, M. and Giannakas, K. (2004). "Inserting GM Products into the Food Chain: The Market and Welfare Effects of Different Labeling and Regulatory Regimes", American Journal of Agricultural Economics, 86(1):42-60. (Topic 1B)

Goulder, L. H. (1995). "Environmental Taxation and the Double Dividend: A Reader's Guide", International Tax and Public Finance, 2(2):157-183. (Topic 3)

Heiner, R. A. (1982). "Theory of the Firm in "Short-Run" Industry Equilibrium", The American Economic Review, 72(3):555-562. (Topic 1B)

Moschini, G. and Lapan, H. (1997). "Intellectual Property Rights and the Welfare Effects of Agricultural R&D", American Journal of Agricultural Economics, 79(4):1229-1242. (Topic 1B)

Moschini, G. and Meilke, K. D. (1989). "Modeling the Pattern of Structural Change in U.S. Meat Demand," American Journal of Agricultural Economics, 71(2):253-261. (Topic 1A)

Muth, R. F. (1964). "The Derived Demand Curve for a Productive Factor and the Industry Supply Curve", Oxford Economic Papers, 16(2):221-234. (Topic 1C)

Perry, M. K. (1978). "Vertical Integration: The Monopsony Case", American Economic Review, 68(4):561-570. (Topic 1B)

Pratt, J. 1964. "Risk Aversion in the Small and in the Large." Econometrica 32:122-136. (Topic 2)

Sandmo, A. 1971. "On the Theory of the Competitive Firm Under Price Uncertainty." American Economic Review 61 (March):65-73. (Topic 2)

ARE 202C: Welfare Analysis and Public Policy

Course Objectives

1. Achieve proficiency in the common methods of applied welfare economic analysis as they are applied in agricultural, development, environmental and natural resource economics
2. Enable students to appreciate the purpose of the abstract theory covered in the core microeconomic theory classes and to apply it to welfare analysis in agriculture, economic development, the environment and natural resources
3. Stimulate and accelerate the process of conceiving a dissertation research topic.

Connections to Other Parts of the Program

1. Supplements and extends the abstract treatment of welfare economics and imperfect competition as presented in the core microeconomic theory courses (200A-C)
2. Provides a context for integrating the material covered in 202A and 202B with the core microeconomic theory sequence
3. Provides applications of the econometric tools covered in 239 and 240A-B
4. Provides a foundation for field courses that use welfare economics methods and concepts (e.g., 231, 233, 215A, 276). Also provides a foundation for dissertation research, which in many cases entails elements of applied welfare economics

Topic Outline

The course covers welfare economics as applied to agriculture, economic development, the environment and natural resources, under perfect and imperfect competition. The following topical outline connects directly to the table of contents in *The Welfare Economics of Public Policy* by Just, Hueth, and Schmitz (JHS), which is a natural textbook for the course.

1. Introduction—Principles, Possibilities, and Limitations (JHS Chs 1-3)
2. Welfare Measurement for Producers, Consumers, and Factor Owners (JHS, Chs 4-7)
3. Aggregation and Economic Analysis of Commodity Policies (JHS, Ch. 8)
4. Multimarket Analysis and General Equilibrium Considerations (JHS, Ch. 9)
5. Welfare Economics of Market Structure and Imperfect Competition (JHS, Ch 10)
6. Welfare Economics of Information and Advertising (JHS, CH 11)
7. Stochastic Welfare Analysis: Risk and Price Stabilization (JHS, CH 12)
8. Nonmarket Measures (with Applications to Environmental Policy) (JHS, Ch 13)
9. Discounting and Intertemporal Analysis (JHS, Ch. 14)

Sample Reading

The Welfare Economics of Public Policy by Just, Hueth, and Schmitz (JHS) is a natural textbook for the course. The reference list in that book provides an example of potential papers that could be assigned by the instructor. The precise reading list in any particular offering of the course will vary depending on the interests and expertise of the instructor.