



## Seminar in Industrial Organization

18301, EC 612

TR 9:30 - 10:45 AM, Bidgood Hall 375

Department of Economics, Finance & Legal Studies

Culverhouse College of Commerce and Business

University of Alabama

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**Office Hours:** By Appointment, Alston Hall 245

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**Course Objective:** This course is designed to provide a graduate level introduction to Industrial Organization. This course is meant to prepare you to have a better understanding of Industrial Organization and to prepare you to produce empirical research on Industrial Organization topics. There will be additional emphasis placed on the most recent developments in empirical IO, but we will also devote time to reading theoretical contributions. The goal is to give students a solid background in IO as well as to develop the tools necessary to conduct their own research.

**Text and Materials:** Anybody interested in conducting research in IO should have Tirole's book, "The Theory of Industrial Organization," however, most of the course will focus on original research therefore it is not required that you purchase the book for this course.

### Course Requirements:

- **Class Participation:** You are expected to come to class prepared to discuss the assigned papers. The papers can be very challenging and you are advised to spend some time reading them prior to class.
- **Referee Report:** The ability to critically review and evaluate other research is critical to being able to conduct your own research. Like any skill, this requires practice. As a part of this course you will be required to submit a referee report for an unpublished working paper. Working papers can be found on most academics' web pages as well as at the NBER working paper series. No two students can choose the same paper so all students must get approval for their chosen paper.
- **Problem Set:** In order to advance your skills of working with data you will be required to complete one empirical-based problem set. The data and instructions will be given to you.
- **Midterm Exam:** There will be a midterm exam covering the concepts and papers discussed in class up to that point.
- **Final Exam:** There will be a final exam covering all of the concepts and papers discussed in class.

**Grading:** Your final course grade will be based on the following weighting scheme:

Class Participation .....	15%
Referee Report .....	15%
Problem Set .....	20%
Midterm Exam (3/8/2012) .....	20%
Final Exam (5/1/2012) .....	30%

Papers listed in **bold** are required reading for this course. It is, however, highly recommended that you read all of the papers if you are interested in conducting research in IO. We will spend a week to two weeks on each topic and cover them as time permits.

### 1. Theory of the Firm (Tirole, Chapter 0)

- **Grossman and Hart (1986), “The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration,” Journal of Political Economy, 94, 691-719.**
- **Hart and Moore (1990), “Property Rights and the Nature of the Firm,” Journal of Political Economy, 98(6), 1119-1158**
- Holmstrom and Milgrom (1994) “The Firm as an Incentive System,” American Economic Review 84, 972-991
- **Joskow, Paul L. 1987. “Contract Duration and Relationship-specific Investments: Empirical Evidence from Coal Markets,” American Economic Review. 77(1):168-185.**
- **Forbes and Lederman, 2009. “Adaptation and Vertical Integration in the Airline Industry,” American Economic Review.**
- Shepard, Andrea. 1993. “Contractual Form, Retail Price, and Asset Characteristics in Gasoline Retailing,” Rand Journal of Economics 24(1), 58-77.
- **Baker, George P., and Thomas N. Hubbard. 2003. “Make versus Buy in Trucking: Asset Ownership, Job Design, and Information,” American Economic Review. 93(3):551-572.**
- Hubbard, Thomas. 2001. “Contractual Form and Market Thickness in Trucking,” Rand Journal of Economics 32(2), 369-386.
- Kellogg, Ryan. 2011 “Learning by Drilling: Inter-Firm Learning and Relationship Persistence in the Texas Oilpatch,” Quarterly Journal of Economics, forthcoming.

### 2. Monopoly (Tirole Chapters 1 and 2)

- **Bulow (1982) “Durable Good Monopolist,” Journal of Political Economy 90:314-352**
- **Bergemann and Valimaki (2004) “Monopoly Pricing of Experience Goods,” Journal of Political Economy**
- **Milgrom and Roberts (1986) “Pricing and Advertising Signals of Product Quality,” Journal of Political Economy 94 796-821**
- **Mussa and Rosen (1978), “Monopoly and Product Quality,” JET, 18, 301-317**
- K. Bagwell, “The Economic Analysis of Advertising,” Handbook of Industrial Organization, Chapter 28.
- Robert, J. and D. Stahl (1993), “Informative Price Advertising in a Sequential Search Model,” Econometrica, 61(3):657-686.
- **Akerberg., D (2001), “Empirically Distinguishing Informative and Prestige Effects of Advertising,” RAND Journal of Economics, 32(2): 316-333.**
- Akerberg, D. (2003), “Advertising, Learning, and Consumer Choice in Experience Good Markets: A Structural Empirical Examination,” International Economic Review, 44(3): 1007-1040.

- Jin, G. and P. Leslie (2003), “The Effects of Disclosure Regulation: Evidence from Restaurants,” *Quarterly Journal of Economics* 118(2): 409-451.

### 3. Price Discrimination (Tirole, Chapter 3)

- Borenstein and Rose, “Competition and Price Dispersion in the U.S. Airline Industry,” *Journal of Political Economy*, 102 (August 1994), 653-683.
- Gerardi and Shapiro, “Does Competition Reduce Price Dispersion? New Evidence from the Airline Industry,” *Journal of Political Economy*, 117 (February 2009), 1-37.
- Marcus Asplund, Rickard Eriksson, Niklas Strand. 2008. “Price Discrimination in Oligopoly: Evidence from Regional Newspapers,” *Journal of Industrial Economics*, 56(2), 333-346.
- Nevo, Aviv and Catherine Wolfram 2002. “Why Do Manufacturers Issue Coupons? An Empirical Analysis of Breakfast Cereals,” *RAND Journal of Economics* 33(2), 319-339.
- Busse, Meghan and Marc Rysman. 2005. “Competition and Price Discrimination in Yellow Pages Advertising,” *RAND Journal of Economics*, 36(2), 378-390.
- Phillip Leslie. 2002. “Price Discrimination in Broadway Theaters,” *RAND Journal of Economics*.
- Shepard, Andrea. 1991. “Price Discrimination and Retail Configuration,” *Journal of Political Economy* 99(February), 30-53.
- Borenstein, Severin. 1991. “Selling Costs and Switching Costs: Explaining Retail Gasoline Markets,” *Rand Journal of Economics* 22(Autumn), 354-69.
- Goldberg, Pinelopi Koujianou. 1996. “Dealer Price Discrimination in New Car Purchases: Evidence from the Consumer Expenditure Survey,” *Journal of Political Economy* 104 (June), 622-654.

### 4. Price Dispersion

- Stahl, “Oligopolistic Pricing with Sequential Consumer Search,” *American Economic Review*, 79(4)700-712, September 1989.
- Stahl, “Oligopolistic Pricing with Heterogeneous Consumer Search,” *International Journal of Industrial Organization*, 14 (April 1996), 243-268.
- H. Varian. 1980. “A Model of Sales,” *American Economic Review*, 70(4), 651-659.
- K. Burdett and K.L. Judd. 1983. “Equilibrium Price Dispersion,” *Econometrica*, 51(4), 955-969.
- Benabou, Roland and Robert Gertner. 1993. “Search with Learning from Prices: Does Increased Inflationary Uncertainty Lead to Higher Markups? *Review of Economic Studies*, 60(1), 69-94.
- Sorensen, Alan. 2000 “Equilibrium Price Dispersion in Retail Markets for Prescription Drugs,” *Journal of Political Economy*, August, 833-50.
- Hong, Han and Matthew Shum 2006 “Using Price Distributions to Estimate Search Costs,” *RAND Journal of Economics*, 37(2), 257-275.
- Matthew Lewis. 2008 “Price Dispersion and Competition with Differentiated Sellers,” *Journal of Industrial Economics*, 56 (3), 654-678.
- Matthew Lewis. 2011 “Asymmetric Price Adjustment and Consumer Search: An Examination of the Retail Gasoline Industry,” *Journal of Economics and Management Strategy*, 20(2).
- Brown and Goolsbee, “Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry,” *Journal of Political Economy*, 110 (June 2002), 481-507.

### 5. Static Oligopoly Competition and Market Power (Tirole, Chapter 5)

- Bulow, J., J. Geanakoplos, and P. Klemperer (1985) “Multimarket Oligopoly: Strategic Substitutes and Complements,” *Journal of Political Economy* 93: 488-511.
- Fundenberg, Drew and Jean Tirole (1984) “The Fat-Cat Effect, The Puppy-Dog Ploy, and the Lean and Hungry Look,” *American Economic Review* 74 (2): 361-366.
- Borenstein, Severin. 1989. “Hubs and High Fares: Dominance and Market Power in the U.S. Airline Industry,” *Rand Journal of Economics* 2(3), Autumn, 344-365.
- Genesove, David and W. Mullin. 1998. “Testing Static Oligopoly Models: Conduct and Cost in the Sugar Industry, 1890-1914,” *Rand Journal of Economics* 29(2), 355-77.
- Corts, Ken. 1998. “Conduct Parameters and the Measurement of Market Power,” *Journal of Econometrics* 88(2), 227-250.
- Bresnahan, Timothy. 1989. “Empirical Studies of Industries with Market Power,” in Schmalensee and Willig (eds.), *Handbook of Industrial Organization*, Volume II: 1011-1058. Amsterdam: North-Holland.
- Wolfram, Catherine. 1999. “Measuring Duopoly Power in the British Electricity Spot Market,” *American Economic Review* 89(4), 805-26.

## 6. Dynamic Competition, Collusion, and Strategic Interaction (Tirole, Chapter 6)

- Rotemberg and Saloner, “A Supergame-Theoretic Model of Price Wars During Booms,” *American Economic Review*, 76 (June 1986), 390-407.
- Haltiwanger and Harrington, “The Impact of Cyclical Demand Movements on Collusive Behavior,” *Rand Journal of Economics*, 22 (Spring 1991), 89-106.
- Green, E., and R. Porter. 1984. “Noncooperative Collusion under Imperfect Price Information,” *Econometrica*. 52:87-100.
- Maskin, Eric, and Jean Tirole. 1988. “A Theory of Dynamic Oligopoly, II: Price Competition, Kinked Demand Curves, and Edgeworth Cycles,” *Econometrica*. 56(3):571-599.
- Chapter 5 of Reiss, Peter and Wolak, Frank. 2007 “Structural Econometric Modeling: Rationales and Examples from IO,” *Handbook of Econometrics*, Volume 5.
- Porter, Robert. 1983. “A Study of Cartel Stability: The Joint Executive Committee, 1880-1886,” *Bell Journal of Economics* 14, Autumn, 301-314.
- Ellison, Glenn. 1994. “Theories of Cartel Stability and the Joint Executive Committee,” *Rand Journal of Economics* 25, Spring, 37-57.
- Borenstein, Severin and Andrea Shepard. 1996. “Dynamic Pricing in Retail Gasoline Markets,” *Rand Journal of Economics* 27(3), 429-51.
- Knittel, Christopher and Victor Stango. 2002. “Price Ceilings as Focal Points for Tacit Collusion: Evidence from the Credit Card Market,” *American Economic Review*.
- Busse, “Firm Financial Condition and Airline Price Wars,” *Rand Journal of Economics*, 33 (Summer 2002), 298-318.
- Chevalier, Kashyap, and Rossi, “Why Dont Prices Rise During Periods of Peak Demand? Evidence from Scanner Data,” *American Economic Review*, March 2003.

## 7. Differentiated Product Competition (Tirole, Chapter 7)

- Perloff, J., and S. Salop 1985. “Equilibrium with Product Differentiation,” *Review of Economic Studies* 52: 107-120.
- Spence, M. 1976. “Product Selection, Fixed Costs and Monopolistic Competition,” *Review of Economic Studies* 43: 217 - 235.

- Bresnahan, Tim “Competition and Collusion in the American Automobile Market: The 1955 Price War,” *Journal of Industrial Economics*, 35 (June 1987), 457-482.
- Nevo, Aviv. 2000. “A Practitioners Guide to Estimation of Random Coefficients Logit Models of Demand,” *Journal of Economics and Management Strategy*, 9(4), 513-548.
- Berry, Steve, Levinsohn, James, and Ariel Pakes. 1995. “Automobile Prices in Market Equilibrium,” *Econometrica* 63(July): 841-990.
- Berry, Steve. 1994. “Estimating Discrete-Choice Models of Product Differentiation,” *Rand Journal of Economics* 25(2), 242-262.
- Nevo, Aviv. 2001. “Measuring Market Power in the Ready-to-Eat Cereal Industry,” *Econometrica*, 69(2), 307-342.
- Tay, A. (2003), “Assessing Competition in Hospital Care Markets: The Importance of Accounting for Quality Differentiation,” *RAND Journal of Economics*, 34 (4), 786814.
- Goldberg, Pinelopi Koujianou. 1995. “Product Differentiation and Oligopoly in International Markets: The Case of the U.S. Automobile Industry,” *Econometrica* 63(July): 891-951.
- Goeree, Michelle Sovinsky. 2008. “Limited Information and Advertising in the U.S. Personal Computer Industry,” *Econometrica* 76(5), September, 1017-1074.
- Knittel, Christopher and Konstantinos Metaxoglou. 2008. “Estimation of Random Coefficient Demand Models: Challenges, Difficulties and Warning,” mimeo UC Davis.
- Einav, Liran 2007. “Seasonality in the U.S. Motion Picture Industry,” *Rand Journal of Economics*, 38(1), Spring, 127-145.

## 8. Competition and Vertical Relationships (Tirole, Chapter 4))

- Marvel, H. 1982. “Exclusive Dealing,” *Journal of law and Economics* 25: 1-26.
- Rey, P., and J. Tirole 1986. “The Logic of Vertical Restraints,” *American Economic Review* 76: 921-939.
- Dixit, A. 1983. “Vertical Integration in a Monopolistically Competitive Industry,” *International Journal of Industrial Organization* 1: 63-78.
- Baron, D., R. Myerson 1982. “Regulating a Monopolist with Unknown Costs,” *Econometrica* 50: 911-930.
- Hortasu, A. and C. Syverson (2007), “Cementing Relationships: Vertical Integration, Foreclosure, Productivity, and Prices,” *Journal of Political Economy*, 115(2): 250-301.
- Hastings, Justine. 2004. “Vertical Relationships and Competition in Retail Gasoline Markets: Empirical Evidence from Contract Changes in Southern California,” *American Economic Review*, March, 317-328.
- Chevalier, Judith A. and Fiona M. Scott Morton. “State Casket Sales Restrictions: a Pointless Undertaking?” *The Journal of Law and Economics* 51, 1 (2008): 1-23.
- Mortimer, Julie. 2008. ”Vertical Contracts in the Video Rental Industry,” *Review of Economic Studies*, 75(1), 165-199

## 9. Dynamics: Entry and Industry Structure

- Milgron, R., and J. Roberts (1982), “Limit Pricing and Entry Under Incomplete Information: An Equilibrium Analysis,” *Econometrica*, 50: 443-460.
- Javanovic, B. 1982. “Selection and Evolution of Industry,” *Econometrica*, 50: 649-670.
- Berry, Steven and Peter Reiss. (2006). “Empirical Models of Entry and Market Structure draft chapter for the Handbook of Industrial Organization Vol. 3.

- Bresnahan, Tim and Peter Reiss. 1991. “Entry and Competition in Concentrated Markets,” *Journal of Political Economy* 99, October, 977-1009.
- Berry, Steve. 1992. “Estimation of a Model of Entry in the Airline Industry,” *Econometrica* 60(4), July, 889-918.
- Mazzeo, Mike. 2002. “Product Choice and Oligopoly Market Structure,” *RAND Journal of Economics*, 33(2) pp. 221-242.
- Dunne, T., M. Roberts, and L. Samuelson (1988), “Patterns of Firm Entry and Exit in U.S. Manufacturing,” *RAND Journal of Economics*, 19: 495-515.
- Berry, Steve and Joel Waldfogel. 1999. “Free Entry and Social Inefficiency in Radio Broadcasting,” *Rand Journal of Economics* 30(3), Autumn, 397-420.
- Hsieh, Chang-Tai and Enrico Moretti. 2003. “Can Free Entry be Inefficient? Fixed Commissions and Social Waste in the Real Estate Industry,” *Journal of Political Economy* 111(5): 1076-1122.
- Goolsbee, Austan and Chad Syverson. 2008 “How Do Incumbents Respond to the Threat of Entry? Evidence from the Major Airlines Quarterly *Journal of Economics*, 123(4): 1611-1633.

## 10. Dynamic Models

- Rust, J. (1987), “Optimal Replacement of GMC Bus Engines: An Empirical Model of Harold Zurcher,” *Econometrica*, 55: 999-1033.
- Hotz, V. J. and R. Miller (1993), “Conditional Choice Probabilities and the Estimation of Dynamic Models,” *Review of Economic Studies*, 60: 397-429.
- Hendel, I. and A. Nevo (2006), “Measuring the Implications of Sales and Consumer Inventory Behavior,” *Econometrica*, 74(6): 1637-1673.d
- Gautam Gowrisankaran and Marc Rysman. 2009 “Dynamics of Consumer Demand for New Durable Goods,” NBER Working Paper 14737
- Crawford, G. S., Shum, M., 2005. “Uncertainty and learning in pharmaceutical demand,” *Econometrica* 73 (4), 1137-1173.
- Ryan, Stephen. “The Costs of Environmental Regulation in a Concentrated Industry.” MIT Center for Energy and Environmental Policy Research Working Paper 05010. MIT, Cambridge, MA.
- Ryan, Stephen. (2006) “The Costs of Environmental Regulation in a Concentrated Industry.” MIT Center for Energy and Environmental Policy Research Working Paper 05010. MIT, Cambridge, MA.
- Aguirregabiria, V. and P. Mira (2007), “Sequential Estimation of Dynamic Discrete Games,” *Econometrica*, 75:1-53.
- Bajari, P., L. Benkard and J. Levin (2007), “Estimating Dynamic Models of Imperfect Competition,” *Econometrica*, 75: 1331-1370.
- Pakes, A., M. Ostrovsky and S. Berry, (2007), “Simple Estimators for the Parameters of Dynamic Discrete Games (with Entry/Exit Examples),” *RAND Journal of Economics*, 38(2): 373-399.

**ADA Accommodations:** Students with special needs or with disabilities must inform the Professor at least one week prior to any exams or assignments to make arrangements. Students with disabilities also should register with the Office of Disability Services, 348-4285.

**Academic Misconduct:** Academic misconduct includes all acts of dishonesty in any academic or related matter and any knowing or intentional help, attempt to help, or conspiracy to help, another

student commit an act of academic dishonesty. All students in attendance at The University of Alabama are expected to be honorable and to observe standards of conduct appropriate to a community of scholars. The University of Alabama expects from its students a higher standard of conduct than the minimum required to avoid discipline. The penalties for academic misconduct can range from a reprimand to a penalty as severe as suspension for a designated length of time or even indefinite suspension.