**INDUSTRIAL ECONOMICS**

Lecturer: Kosmas Marinakis

Class teacher: Alexey Ostapchuk

**Course description**

*Industrial Economics or Industrial Organization* (IO) is a one-year course which is one of ‘further units’ of the external program of the University of London (UoL). IO utilizes techniques from microeconomics to the study of firms as organizations, market structures, strategic interaction, market efficiency and industrial policy. IO requires extensive use of game-theory. A few introductory classes will be used to review the relevant techniques and applications. Further reviews of specific topics from economic theory and econometrics will be included in course curriculum whenever necessary. The course consists of three major parts. The first part of the course constitutes a methodological and theoretical introduction into the tools, methods and approaches used all over the course. It provides a quick review of game theoretic concepts, followed by the discussion of the nature of markets, the firm and the agency relations within business organizations. The second part constitutes the core of the course, and covers imperfect competition in static and dynamic settings, theoretical and empirical studies of collusion, entry and accommodation, product differentiation, monopolistic behavior, vertical integration and determinants of market structure. The third part is devoted to industrial policy and efficiency analysis, including government regulation and natural monopolies reforms with examples and applications.

**Teaching methods**

Two hours a week of lecture and two hours a week of classes. There will be 66 hours of lectures and 66 hours of classes over the year.

**Homework**

There will be 10 – 14 homework assignments. Homework will be turned in to the class teacher and he will be responsible to grade it.

**Attendance Policy & Class Participation**

Attendance record will be kept but it will not affect final grades. According to previous experience, absolutely all students in the A and B range had excellent attendance record. Students are encouraged to participate in the lecture. Questions and comments promote the quality of the lecture and make it more interesting.

**Office Hours**

You may find me at my office (3432) during normal working hours. It would be better if you arrange an appointment with me through email. Prior attending the office hours students should have prepared specific questions.

**Classroom Manners**

It is my priority to make the lecture pleasant for the attendants. Talking, making noise, eating, reading irrelevant material or studying for other classes during the lecture are considered disrespectful for the instructor and the rest of the class, and will not be tolerated. Impudence and rudeness are not characteristics of educated people and are not welcomed in the academic community.

**Academic Integrity**

Students are reminded of the existence of the university policy on academic integrity found in the Code of Student Conduct (available in the student handbook) and the utilization implications of the Honor Pledge.

**Students with Disabilities**

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with Disability Services of HSE.

**Grade detremination**

For the fall semester grading will be as follows: Homework 20%, Winter midterm 30%, Winter exam 50%. For the spring semester grading will be: Homework 20%, Spring Midterm 30%, Final exam 50%. All tests and exams will be cumulative nad required. A makeup midterm may be offered only if a serious and officially certified excuse is presented. The final grade for the class will be the average over the two semesters. External examination at the UoL takes place in May-June; its results do not count towards the final grade for the course at HSE.

**Main reading**

1. Symeonidis, George, Industrial Economics. University of London Study Guide (SG), 1999.
2. Church J., and R.Ware, Industrial Organization. A Strategic Approach. Irwin (CW), 2000.
3. Tirole, Jean, The Theory of Industrial Organization. MIT Press, (Tir) 1992.

**Webpage**

Announcements, Homework assignments, handouts, the course calendar and other useful material for the course will be available online at www.kmarinakis.org. Students are responsible to check the webpage regularly.

**Additional reading**

1. Schmalensee, Richard, and Robert Willig, eds. (HB) Handbook of Industrial Organization. Vols. 1-2. North-Holland, 1989.
2. Shy, Oz. (Shy) Industrial Organization. Theory and Applications. MIT Press. 1995.
3. Carlton, Dennis W., and Jeffrey M. Perloff (CP) Industrial Organization. 3d ed. Addison-Wesley, 1999.
4. Martin, Stephen. (Mar) Industrial Economics. 2d ed. Prentice Hall. 1994.
5. Pepall, Lynne; Daniel J. Richards; George Norman. (PRN) Industrial Organization: Contemporary Theory and Practice. 2d. ed. South-Western, 2002.
6. Hay, D., and D.Morris. Industrial Economics and Organization. 2d ed. Oxford. 1996.
7. Milgrom, Paul, and John Roberts. Economics, Organization and Management. 1998. (Милгром П., Робертс Дж. Экономика, организация и менеджмент. Дело, 1999)
8. Sherer, F.M. and D.Ross. Industrial market structure and economic performance. Houghton Mifflin, 1990 (Шерер Ф.М. и Д. Росс. Структура отраслевых рынков. Инфра-М, 1997.)
9. Sutton, John. Sunk cost and market structure. MIT Press, 1991.
10. Armstrong, Mark, Simon Cowan and John Vickers. Regulatory Reform: economic analysis and British experience. MIT Press, 1994.

Other readings, including journal articles, are listed under particular topics.

**Course Outline**

## Introduction to Industrial Organisation

* *[Mar], Ch. 1.*
* *[PRN], Ch. 1.*

## Noncooperative games for applied analysis

* *Gibbons, Robert J. A primer in game theory (aka Game theory for applied economists). Addison-Wesley, 1993, ch.1 & 2.*
* *[Tir], Appendix on game theory.*
* *Osborne, Martin J. An introduction to game theory. Oxford University Press, 2004.*
* *Fudenberg, Drew, and Jean Tirole. Noncooperative game theory for IO: introduction and overview. In: [HB], ch.5.*

## Size and structure of the firm

* *[Tir], The theory of the firm (Introductory chapter)*
* *[SG], ch.1*
* *Williamson O. Transaction cost economics. In: [HB], ch.3, или Williamson O. Economic institutions of capitalism. Free press, 1985, ch.2-3 (рус.пер: О.Уильямсон, Экономические институты капитализма, СПб, 1997; THESIS, 1993, #3, c.39-49,*
* *Hart O. Firms, contracts and financial structure. OUP, 1995, ch.1-3.*
* [*Monteverde, Kirk, and David J.Teece*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Kirk%20Monteverde;%20David%20J.%20Teece%22&hp=25&si=1)*.* [*Supplier Switching Costs and Vertical Integration in the Automobile Industry*](http://www.jstor.org/view/0361915x/di010140/01p0017v/0?currentResult=0361915x%2bdi010140%2b01p0017v%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Amonteverde%2Bti%253Aswitching)*.* [*The Bell Journal of Economics*](http://www.jstor.org/browse/0361915x)*,* [*Vol. 13, No. 1*](http://www.jstor.org/browse/0361915x/di010140) *(Spring, 1982), pp. 206-213*
* [*Joskow*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Paul%20L.%20Joskow%22&hp=25&si=1)*, Paul L.* [*Contract Duration and Relationship-Specific Investments: Empirical Evidence from Coal Markets*](http://www.jstor.org/view/00028282/di950054/95p0045q/0?currentResult=00028282%2bdi950054%2b95p0045q%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Ajoskow%2Bti%253Acontract)*.* [*The American Economic Review*](http://www.jstor.org/browse/00028282)*,* [*Vol. 77, No. 1*](http://www.jstor.org/browse/00028282/di950054) *(Mar., 1987), pp. 168-185*
	+ *[CP], ch.2*
	+ *Grossman, Sanford, and Oliver Hart. The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration. Journal of Political Economy (1986) 94(4): 691-719.*
	+ *Hart, Oliver, and John Moore. Property rights and the nature of the firm. Journal of Political Economy, 1990, v.98, p.1119-1158.*
	+ [*Klein, Benjamin; Robert G. Crawford; Armen A. Alchian*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Benjamin%20Klein;%20Robert%20G.%20Crawford;%20Armen%20A.%20Alchian%22&hp=25&si=1)*.* [***Vertical Integration, Appropriable Rents, and the Competitive Contracting Process***](http://www.jstor.org/view/00222186/ap020036/02a00030/0?currentResult=00222186%2bap020036%2b02a00030%2b0%2cFF984337&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Aklein%2Bti%253Avertical%2Bintegr%20)*.*[*Journal of Law and Economics*](http://www.jstor.org/browse/00222186)*,* [*Vol. 21, No. 2*](http://www.jstor.org/browse/00222186/ap020036) *(Oct., 1978), pp. 297-326*
	+ [*Klein, Benjamin, and Kevin M. Murphy*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Benjamin%20Klein;%20Kevin%20M.%20Murphy%22&hp=25&si=1)*.* [***Vertical Restraints as Contract Enforcement Mechanisms***](http://www.jstor.org/view/00222186/ap020059/02a00010/0?currentResult=00222186%2bap020059%2b02a00010%2b1%2c2400201002&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Aklein%2Bti%253Avertical%2Binte%20)***.***[*Journal of Law and Economics*](http://www.jstor.org/browse/00222186)*,* [*Vol. 31, No. 2*](http://www.jstor.org/browse/00222186/ap020059) *(Oct., 1988), pp. 265-297*

## Agency theory, ownership and control

* *[Tir], The theory of the firm (Introductory chapter)*
* *[SG], ch.2*
* [*Nickell*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Stephen%20J.%20Nickell%22&hp=25&si=1)*, Stephen J.* [***Competition and Corporate Performance***](http://www.jstor.org/view/00223808/di980621/98p0033y/0?currentResult=00223808%2bdi980621%2b98p0033y%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Anickell%2Bti%253Acompetition)[*The Journal of Political Economy*](http://www.jstor.org/browse/00223808)*,* [*Vol. 104, No. 4*](http://www.jstor.org/browse/00223808/di980621) *(Aug., 1996), pp. 724-746*
* *Holmstrom, Bengt and Jean Tirole. The theory of the firm. In: [HB], ch.2*
* *[CP], ch.2*
* *Laffont, Jean-Jacques and Ramon Martimort. The Principal-Agent theory. PUP, 2002.*
* *Hart, Oliver, Jean Tirole, Dennis Carlton, Oliver Williamson. Vertical integration and market foreclosure. Brookings papers on economic activity, 1990, p.205-286.*
* *Salanie, Bertrand. Contract theory: a primer. MIT Press, 1997.*
* *Gibbons, R. Incentives between firms (and within). Management Science, v.51 , No.1, 2005, p. 2-17,*
* *Nickell S., Nocolitsas D., Dryden N. What makes firms perform well? European Economic Review, 1996, v.41, p.783-796.*

## Static price competition in oligopoly models

* *[Tir], ch.5*
* *[SG], ch.3*
* *[CP], ch.7*
* *[Shy], ch.6*
* *[Mar], ch.5*
* *Chapiro, Carl. Theory of oligopoly behavior. In: [HB], ch.6*
* *Kreps, David M., and Jose Scheinkman. Quantity precommitment and Bertrand competition yield Cournot outcomes. Bell Journal of Economics, vol.14, no.3, Autumn 1983, p.326-337.*
* [*Bresnahan*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Timothy%20F.%20Bresnahan%22&hp=25&si=1)*, Timothy F.* [***Duopoly Models with Consistent Conjectures***](http://www.jstor.org/view/00028282/di950024/95p01257/0?currentResult=00028282%2bdi950024%2b95p01257%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Abresnahan)*.*[*The American Economic Review*](http://www.jstor.org/browse/00028282)*,* [*Vol. 71, No. 5*](http://www.jstor.org/browse/00028282/di950024) *(Dec., 1981), pp. 934-945*

## Dynamic price competition

* *[Tir], ch.6*
* *[SG], ch.4*
* *[CP], ch.6-7*
* [*Porter*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Robert%20H.%20Porter%22&hp=25&si=1)[*, Robert H. Study of Cartel Stability: The Joint Executive Committee, 1880-1886*](http://www.jstor.org/view/0361915x/di010143/01p0002j/0?currentResult=0361915x%2bdi010143%2b01p0002j%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Aporter%2Bti%253Acartel)*.* [*The Bell Journal of Economics*](http://www.jstor.org/browse/0361915x)*,* [*Vol. 14, No. 2*](http://www.jstor.org/browse/0361915x/di010143) *(Autumn, 1983), pp. 301-314 Green, Edward J., and Robert Porter. Noncooperative Collusion under Imperfect Price Information. Econometrica, 1984, vol. 52, p.87-100.*
* [*Rotemberg, Julio J., and Garth Saloner*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Julio%20J.%20Rotemberg;%20Garth%20Saloner%22&hp=25&si=1)*.* [*A Supergame-Theoretic Model of Price Wars during Booms*](http://www.jstor.org/view/00028282/di950048/95p0008d/0?currentResult=00028282%2bdi950048%2b95p0008d%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Arotemberg)*.* [*The American Economic Review*](http://www.jstor.org/browse/00028282)*,* [*Vol. 76, No. 3*](http://www.jstor.org/browse/00028282/di950048) *(Jun., 1986), pp. 390-407.*
* *Slade, Margaret E. Strategic pricing models and interpretation of price-war data. European Economic Review, 1990, v.31 p.524-537.*
* [*Ellison*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Glenn%20Ellison%22&hp=25&si=1)*, Glenn.* [*Theories of Cartel Stability and the Joint Executive Committee*](http://www.jstor.org/view/07416261/di010184/01p00195/0?currentResult=07416261%2bdi010184%2b01p00195%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253A%2522Glenn%2BEllison%2522)*.*[*The RAND Journal of Economics*](http://www.jstor.org/browse/07416261)*,* [*Vol. 25, No. 1*](http://www.jstor.org/browse/07416261/di010184) *(Spring, 1994), pp. 37-57*
* *Sherer and Ross, 1990, Ch. 7-8.*
* *[Shy], ch.6*
* [*Levenstein*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Margaret%20C.%20Levenstein%22&hp=25&si=1)*, Margaret C.* [*Price Wars and the Stability of Collusion: A Study of the Pre-World War I Bromine Industry*](http://www.jstor.org/view/00221821/di982449/98p0203a/0?currentResult=00221821%2bdi982449%2b98p0203a%2b0%2cFFFF3F&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253ALevenstein%2Bprice%2Bwars)*.* [*The Journal of Industrial Economics*](http://www.jstor.org/browse/00221821)*,* [*Vol. 45, No. 2*](http://www.jstor.org/browse/00221821/di982449) *(Jun., 1997), pp. 117-137.*
* [*Slade*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Margaret%20E.%20Slade%22&hp=25&si=1)*, Margaret E.* [*Interfirm Rivalry in a Repeated Game: An Empirical Test of Tacit Collusion*](http://www.jstor.org/view/00221821/di974553/97p0132h/0?currentResult=00221821%2bdi974553%2b97p0132h%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253A%2522Margaret%2BE%252FSlade%2522)*.* [*The Journal of Industrial Economics*](http://www.jstor.org/browse/00221821)*,* [*Vol. 35, No. 4, The Empirical Renaissance in Industrial Economics*](http://www.jstor.org/browse/00221821/di974553) *(Jun., 1987), pp. 499-516*
* *Slade, Margaret E. Vancouver’s Gasoline Price Wars: An Empirical Exercise in Uncovering Supergame Strategies. Review of Economic Studies, 1987, vol.59, no.2, p.257-276.*

## Entry deterrence and entry accommodation

* *[Tir], ch.8*
* *[SG], ch.5*
* [*Fudenberg, Drew, and Jean Tirole*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Drew%20Fudenberg;%20Jean%20Tirole%22&hp=25&si=1)*.* [***The Fat-Cat Effect, the Puppy-Dog Ploy, and the Lean and Hungry Look***](http://www.jstor.org/view/00028282/di950429/95p0441q/0?currentResult=00028282%2bdi950429%2b95p0441q%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Afudenberg)***.*** [*The American Economic Review*](http://www.jstor.org/browse/00028282)*,* [*Vol. 74, No. 2, Papers and Proceedings of the Ninety-Sixth Annual Meeting of the American Economic Association*](http://www.jstor.org/browse/00028282/di950429) *(May, 1984), pp. 361-366*
* [*Dixit*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Avinash%20Dixit%22&hp=25&si=1)*, Avinash.* [*The Role of Investment in Entry-Deterrence*](http://www.jstor.org/view/00130133/di983457/98p02922/0?currentResult=00130133%2bdi983457%2b98p02922%2b0%2c8B1A&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Adixit%2Bti%253Aentry%2Bdeterrence)*.* [*The Economic Journal*](http://www.jstor.org/browse/00130133)*,* [*Vol. 90, No. 357*](http://www.jstor.org/browse/00130133/di983457) *(Mar., 1980), pp. 95-106*
* *[CP], ch.10*
* [*Bulow, Jeremy I.; John D. Geanakoplos; Paul D. Klemperer*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Jeremy%20I.%20Bulow;%20John%20D.%20Geanakoplos;%20Paul%20D.%20Klemperer%22&hp=25&si=1)[*Multimarket Oligopoly: Strategic Substitutes and Complements*](http://www.jstor.org/view/00223808/di951031/95p0103i/0?currentResult=00223808%2bdi951031%2b95p0103i%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D26%26Query%3Dau%253Ageanakoplos)*.*[*The Journal of Political Economy*](http://www.jstor.org/browse/00223808)*,* [*Vol. 93, No. 3*](http://www.jstor.org/browse/00223808/di951031) *(Jun., 1985), pp. 488-511*
* [*Lieberman*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Marvin%20B.%20Lieberman%22&hp=25&si=1)*, Marvin B.* [*Excess Capacity as a Barrier to Entry: An Empirical Appraisal*](http://www.jstor.org/view/00221821/di974553/97p0137m/0?currentResult=00221821%2bdi974553%2b97p0137m%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Alieberman%2Bti%253Acapacity)*.* [*The Journal of Industrial Economics*](http://www.jstor.org/browse/00221821)*,* [*Vol. 35, No. 4, The Empirical Renaissance in Industrial Economics*](http://www.jstor.org/browse/00221821/di974553) *(Jun., 1987), pp. 607-627*

## Product differentiation

* *[Tir], ch.7*
* *[SG], ch.6*
* [*Shaked, Avner, and John Sutton*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Avner%20Shaked;%20John%20Sutton%22&hp=25&si=1)*.* [*Relaxing Price Competition Through Product Differentiation*](http://www.jstor.org/view/00346527/di990658/99p0113g/0?currentResult=00346527%2bdi990658%2b99p0113g%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Ashaked%2Bau%253Asutton)*.* [*The Review of Economic Studies*](http://www.jstor.org/browse/00346527)*,* [*Vol. 49, No. 1*](http://www.jstor.org/browse/00346527/di990658) *(Jan., 1982), pp. 3-13*
* *[Shy], ch.7*
* *[CP], ch.8*
* [*Salop*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Steven%20C.%20Salop%22&hp=25&si=1)*, Steven C.* [*Monopolistic Competition with Outside Goods*](http://www.jstor.org/view/0361915x/di010134/01p0059b/0?currentResult=0361915x%2bdi010134%2b01p0059b%2b0%2c0F0201&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Asalop%2Bcompetition)*.* [*The Bell Journal of Economics*](http://www.jstor.org/browse/0361915x)*,* [*Vol. 10, No. 1*](http://www.jstor.org/browse/0361915x/di010134) *(Spring, 1979), pp. 141-156*
* *D’Aspremont, Claude, J.J.Gabszewicz, Jean-Francois Thisse. On Hotelling’s ‘Stability in competition’. Econometrica, v.47, 1979, p.1145-1150.*
* [*Perloff, Jeffrey M, and Steven C. Salop*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Jeffrey%20M.%20Perloff;%20Steven%20C.%20Salop%22&hp=25&si=1)*.* [*Equilibrium with Product Differentiation*](http://www.jstor.org/view/00346527/di990671/99p0309p/0?currentResult=00346527%2bdi990671%2b99p0309p%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Asalop)*.* [*The Review of Economic Studies*](http://www.jstor.org/browse/00346527)*,* [*Vol. 52, No. 1*](http://www.jstor.org/browse/00346527/di990671) *(Jan., 1985), pp. 107-120*
* [*Judd*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Kenneth%20L.%20Judd%22&hp=25&si=1)*, Kenneth L.* [*Credible Spatial Preemption*](http://www.jstor.org/view/07416261/di010149/01p0055e/0?currentResult=07416261%2bdi010149%2b01p0055e%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Ajudd%2Bti%253Apreemption)*.* [*The RAND Journal of Economics*](http://www.jstor.org/browse/07416261)*,*[*Vol. 16, No. 2*](http://www.jstor.org/browse/07416261/di010149) *(Summer, 1985), pp. 153-166*
* [*Shaked, Avner, and John Sutton*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Avner%20Shaked;%20John%20Sutton%22&hp=25&si=1)*.* [*Product Differentiation and Industrial Structure*](http://www.jstor.org/view/00221821/di974555/97p0151m/0?currentResult=00221821%2bdi974555%2b97p0151m%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Ashaked%2Bau%253Asutton)*.* [*The Journal of Industrial Economics*](http://www.jstor.org/browse/00221821)*,* [*Vol. 36, No. 2*](http://www.jstor.org/browse/00221821/di974555) *(Dec., 1987), pp. 131-146*

## Advertising

* *[CP]*
* *[Shy]*
* *Gabaix, Xavier, and David Laibson. Consumer Myopia, Shrouded Attributes, and Information Suppression in Competitive Markets. Quarterly Journal of Economics, 121 (2), May 2006, p. 505-540*
* *Bagwell K. The economics analysis of advertising. Mimeo, Columbia University, 2005*
* *Lancaster, Kelvin. The Economics of product variety: a survey. Marketing Science, 1990, vol.9, no.3, p.189-203.*
* *Eaton, B.Curtis and Richard G.Lipsey. Product differentiation. In: [HB], ch.12*
* *Klemperer, Paul. Markets with Consumer Switching Costs. Quarterly Journal of Economics, 102 (1987), 375-394.*

## Monopoly and price discrimination

* *[SG], ch.7*
* *[CP], ch.11-12*
* *[Tir], ch.3*
* *[Mar], ch.15*
* *Sherer and Ross, ch.13*
* [*Oi*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Walter%20Y.%20Oi%22&hp=25&si=1)*, Walter Y.* [*A Disneyland Dilemma: Two-Part Tariffs for a Mickey Mouse Monopoly*](http://www.jstor.org/view/00335533/di951803/95p00197/0?currentResult=00335533%2bdi951803%2b95p00197%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Aoi%2Bti%253Amouse)*.* [*The Quarterly Journal of Economics*](http://www.jstor.org/browse/00335533)*,* [*Vol. 85, No. 1*](http://www.jstor.org/browse/00335533/di951803) *(Feb., 1971),pp.77-96.* [*Varian*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Hal%20R.%20Varian%22&hp=25&si=1)*, Hal R.* [*Price Discrimination and Social Welfare*](http://www.jstor.org/view/00028282/di950046/95p01133/0?currentResult=00028282%2bdi950046%2b95p01133%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Avarian%2Bti%253Adiscrimination)*.* [*The American Economic Review*](http://www.jstor.org/browse/00028282)*,* [*Vol. 75, No. 4*](http://www.jstor.org/browse/00028282/di950046) *(Sep., 1985), pp. 870-875*
* [*Verboven*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Frank%20Verboven%22&hp=25&si=1)*, Frank.* [*International Price Discrimination in the European Car Market*](http://www.jstor.org/view/07416261/di010193/01p0074j/0?currentResult=07416261%2bdi010193%2b01p0074j%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Averboven%2Bti%253Adiscrimination)*.*[*The RAND Journal of Economics*](http://www.jstor.org/browse/07416261)*,* [*Vol. 27, No. 2*](http://www.jstor.org/browse/07416261/di010193) *(Summer, 1996), pp. 240-268*
* *Graddy, Kathyn. Testing for imperfect price competition at the Fulton fish market. The RAND Journal of Economics, 1995, Vol.26, no.1, p.75-92.*

## Vertical integration and vertical restraints

* *[Tir], ch.4*
* *[SG], ch.8*
* *[Mar], ch.17*
* [*Mathewson, G.Frank, and Ralph A. Winter*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22G.%20F.%20Mathewson;%20R.A.%20Winter%22&hp=25&si=1)*.* [*An Economic Theory of Vertical Restraints*](http://www.jstor.org/view/07416261/di010144/01p0214t/0?currentResult=07416261%2bdi010144%2b01p0214t%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253AMathewson%2Bti%253Avertical)*.* [*The RAND Journal of Economics*](http://www.jstor.org/browse/07416261)*,* [*Vol. 15, No. 1*](http://www.jstor.org/browse/07416261/di010144) *(Spring, 1984), pp. 27-38.*
* [*Mathewson, G.Frank, and Ralph A. Winter*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22G.%20F.%20Mathewson;%20R.A.%20Winter%22&hp=25&si=1)*.* [*On Vertical Restraints and the Law: A Reply*](http://www.jstor.org/view/07416261/di010161/01p0184b/0?currentResult=07416261%2bdi010161%2b01p0184b%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253AMathewson%2Bti%253Avertical)*.* [*The RAND Journal of Economics*](http://www.jstor.org/browse/07416261)*,* [*Vol. 19, No. 2*](http://www.jstor.org/browse/07416261/di010161) *(Summer, 1988), pp. 298-301*
* [*Mathewson, G.Frank, and Ralph A. Winter*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22G.%20F.%20Mathewson;%20R.A.%20Winter%22&hp=25&si=1)*.* [*The Competitive Effects of Vertical Agreements: Comment*](http://www.jstor.org/view/00028282/di950060/95p0059x/0?currentResult=00028282%2bdi950060%2b95p0059x%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253AMathewson%2Bti%253Avertical)*.* [*The American Economic Review*](http://www.jstor.org/browse/00028282)*,* [*Vol. 77, No. 5*](http://www.jstor.org/browse/00028282/di950060) *(Dec., 1987), pp. 1057-1062.*
* *[CP], ch.13*
* *Sherer and Ross, ch.15*
* *Katz, M.L. Vertical contractual relations. In: [HB], ch.11*
* *Antitrust Cases: Monopolies and Mergers Commission (MMC) New Motor Cars, Cm 1808 (London: H. M. S. O., 1992).*
* [*Rey, Patrick, and Joseph E. Stiglitz*](http://www.jstor.org/search/BasicResults?Search=Search&Query=aa:%22Patrick%20Rey;%20Joseph%20Stiglitz%22&hp=25&si=1)*.* [*The Role of Exclusive Territories in Producers' Competition*](http://www.jstor.org/view/07416261/di010190/01p0063f/0?currentResult=07416261%2bdi010190%2b01p0063f%2b0%2c00&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Arey%2Bau%253Astiglitz)*.* [*The RAND Journal of Economics*](http://www.jstor.org/browse/07416261)*,* [*Vol. 26, No. 3*](http://www.jstor.org/browse/07416261/di010190) *(Autumn, 1995), pp. 431-451.*
* *The determinants of market structure*
* *Bain, Joe S.* [*Economies of Scale, Concentration, and the Condition of Entry in Twenty Manufacturing Industries*](http://www.jstor.org/view/00028282/di950305/95p0509n/0?currentResult=00028282%2bdi950305%2b95p0509n%2b0%2cF6FF4F&searchUrl=http%3A%2F%2Fwww.jstor.org%2Fsearch%2FBasicResults%3Fhp%3D25%26si%3D1%26Query%3Dau%253Abain%2Bindustry)*.* [*The American Economic Review*](http://www.jstor.org/browse/00028282)*,* [*Vol. 44, No. 1*](http://www.jstor.org/browse/00028282/di950305) *(Mar., 1954), pp. 15-39*
* *Sutton, John. Sunk cost and market structure. MIT Press, 1991*
* *Sutton, John. Game-theoretic models of market structure. In: Kreps D.M. and Wallis K.F., eds. Advances in economics and econometrics. The VIIIth world congress. v.1, CUP, 1997*
* *Sutton, John. Technology and market structure. European Economic Review, 1996, v.40, p.511-530.*
* *[SG], ch.9*
* *[Mar], ch.8*
* *Sherer and Ross, ch.3-4*

## Competition and industrial policy

* *[Mar], various chapters.*
* *[SG], ch.10*
* *[CP], ch.17, 20*
* *Sherer and Ross, ch.3-4.*

## Regulation and natural monopolies

* *Armstrong, Mark, Simon Cowan and John Vickers. Regulatory Reform: economic analysis and British experience. MIT Press, 1994.*
* *[SG], ch.11*
* *Laffont J.J. and Tirole J. Theory of incentives for procurement and regulation. MIT Press, 1999.*
* *Winston, Clifford. US industry adjustment to economic deregulation. Journal of Economic Perspectives, 1998, v.12, no.3, p.89-110.*
* *Christensen, Laurtis R., and William H, Greene. Economies of scale in US electric power generation. Journal of Political Economy, 1973, v.84, no.4, p.655-676.*
* *Evans, David S. and James J.Heckman. A test for subadditivity of the cost function with an application to the Bell system. American Economic Review, 1984, vol.74, p.615-623.*

**Distribution of hours**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Topics** | **Total (hours)**  | **Contact hours** | **Self-study** |
| **Lectures** | **Classes** |
|  | [Introduction to Industrial Organisation](#_Introduction_to_Industrial) | 16 | 2 | 2 | 12 |
|  | [Noncooperative games for applied analysis](#_Noncooperative_games_for) | 20 | 4 | 4 | 12 |
|  | [Size and structure of the firm](#_Size_and_structure) | 30 | 4 | 6 | 20 |
|  | [Agency theory, ownership and control](#_Agency_theory,_ownership) | 16 | 2 | 2 | 12 |
|  | [Static price competition in oligopoly model](#_Static_price_competition)s | 22 | 4 | 4 | 14 |
|  | [Dynamic price competition](#_Dynamic_price_competition) | 26 | 6 | 6 | 14 |
|  | [Entry deterrence and entry accommodation](#_Entry_deterrence_and) | 20 | 4 | 4 | 12 |
|  | [Product differentiation](#_Product_differentiation) | 36 | 8 | 8 | 20 |
|  | [Advertising](#_Advertising) | 20 | 4 | 4 | 12 |
|  | [Monopoly and price discrimination](#_Monopoly_and_price) | 30 | 6 | 6 | 18 |
|  | [Vertical integration and vertical restraints](#_Vertical_integration_and) | 20 | 4 | 4 | 12 |
|  | [The determinants of market structure](#_The_determinants_of) | 32 | 6 | 6 | 20 |
|  | [Competition and industrial policy](#_Competition_and_industrial) | 16 | 2 | 2 | 12 |
|  | [Regulation and natural monopolies](#_Regulation_and_natural) | 36 | 8 | 6 | 22 |
|  | **Total:** | **340** | **64** | **64** | **212** |