Topics in Applied Industrial Organization

Course title - Intitulé du cours	Topics in Applied Industrial Organization
Level / Semester - Niveau /semestre	M2 / S2
School - Composante	Ecole d'Economie de Toulouse
Teacher - Enseignant responsable	SALANT David
Other teacher(s) - Autre(s) enseignant(s)	ERSHOV Daniel
Lecture Hours - Volume Horaire CM	30
TA Hours - Volume horaire TD	0
TP Hours - Volume horaire TP	0
Course Language - Langue du cours	Anglais
TA and/or TP Language - Langue des TD et/ou TP	

Teaching staff contacts - Coordonnées de l'équipe pédagogique :

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Office Number: TBD

Office Hours: TBD – there will be office hours by appointment, as well as set hours

Course's Objectives - Objectifs du cours :

The Lectures conducted by Salant are intended to introduce the essential elements of auction theory and explain how they are needed to help address auction design, management and strategy in practice for those interested managing or bidding in auctions. Auctions are highly structured negotiations with a defined set of rules for offers, counter-offers, price determination and for allocations. These rigid structures mean that auctions can be analyzed by mathematical models more accurately and completely than can most other types of market transactions. This course provides a guide for modeling, analyzing, and predicting the outcomes of auctions.

The course starts with a review of essential elements of auction theory. In practice, auction theory will rarely provide an exact and prescriptive model that can be applied directly. On the other hand, auction theory does provide both insights and specific results that are of direct value to the practitioner. While, this course might ideally provide a complete check-list for what to do to design, set up and manage an auction, or for bidders to decide how to bid, that scope is too broad to be practical.

Rather, the focus in the course is on principles, tools and examples that can be used to analyze auctions. This first requires some way to categorize different types of auctions. In this

categorization, I also provide explain how the auction design and strategy should differ depending on the type of auction. Second, I explain the main results from game theory and the theory of auctions that can provide practical frameworks for analyzing auctions and bid strategy. Third, we will discuss a fair amount of experience from actual auctions, but also from experiments.

The lectures and the main text, are intended to provide a guide to the literature and toward of the application of the theory to actual auctions.

Lectures run by Daniel Ershov use an Empirical IO perspective to examine how (and whether) digital technology affected markets and economic activity. Lectures focus on key empirical research papers in the digitization economics literature. The papers use a combination of reduced form methods (e.g., difference in differences) and structural methods (e.g., demand estimation, entry games) to look at economic principles that guide firm strategies in digital markets. Lectures also discuss competition policy and recent anti-trust activity in digital markets.

Prerequisites - Pré requis :

Knowledge of intermediate microeconomics, M1 level math and econometrics is expected.

Daniel Ershov's lectures are complementary to the Empirical IO Course which focuses on structural estimation methods.

Practical information about the sessions - Modalités pratiques de gestion du cours :

Students are expected to read relevant materials before each class and to participate in class discussions.

Grading system - Modalités d'évaluation :

Students are graded based on course participation, assignments, and a final exam.

Late assignments are not accepted. If the student wishes to appeal a grade on an assignment or an exam, they should write a short paragraph explaining why they should obtain extra points. A hard copy of this needs to be turned in by the end of the week in which the exams or assignments are handed back. Your entire exam/assignment will be re-graded and your score may go up or down.

Plagiarism or other forms of academic misconduct are not tolerated.

Bibliography/references - Bibliographie/références :

For Salant's lectures, the primary text is

A Primer on Auction Design, Management, and Strategy, David Salant, MIT Press 2014.

Supplementary texts and readings:

Auctions: Theory and Practice, Paul Klemperer, Princeton, 2004.

Putting Auction Theory to Work, Paul Milgrom, Cambridge University Press, 2004.

Auction Theory, Vijay Krishna, Academic Press, 2010.

Myerson, Roger B. "Optimal auction design." *Mathematics of operations research* 6.1 (1981): 58-73.

Milgrom, Paul R., and Robert J. Weber. "A theory of auctions and competitive bidding." *Econometrica: Journal of the Econometric Society* (1982): 1089-1122.

Green, Jerry, and Jean-Jacques Laffont. "Characterization of satisfactory mechanisms for the revelation of preferences for public goods." *Econometrica: Journal of the Econometric Society* (1977): 427-438.

Levin, Jonathan, and Andrzej Skrzypacz. "Properties of the combinatorial clock auction." *The American Economic Review*106.9 (2016): 2528-2551.

Bernheim, B. Douglas, and Michael D. Whinston. "Menu auctions, resource allocation, and economic influence." *The quarterly journal of economics* 101.1 (1986): 1-31.

Additional papers will be assigned during lectures.

Session planning - Planification des séances :

Salant's lectures will follow the order in the main text. But, the text is only a Primer (Webster's definition of a Primer: "a small introductory book on a subject.")

I) Introduction to auction design, management and strategy.

II) Introduction/review of game theory. Salant, Chapter 2.

III) Revenue equivalence. Klemperer (2004), Chapter 1, Salant, Chapter 3.

IV) Optimal auctions.   Salant Chapter 4.   Myerson, Myerson, Roger B. "Optimal auction design." *Mathematics of operations research* 6.1 (1981): 58-73.

V) Vickrey auctions.

Green, Jerry, and Jean-Jacques Laffont. "Characterization of satisfactory mechanisms for the revelation of preferences for public goods."*Econometrica: Journal of the Econometric Society* (1977): 427-438.

Milgrom,(2004), Chapter 2.

VI) Winner's curse.

Milgrom, Paul R., and Robert J. Weber. "A theory of auctions and competitive bidding." *Econometrica: Journal of the Econometric Society* (1982): 1089-1122.

VII) Sequential auctions and substitutes. Salant, Chapter 6. Milgrom, Chapter 3.

VIII)Sequential auctions and complements. Salant, Chapter 7.

IX) Supply function games and clock auctions.

Klemperer, Paul D., and Margaret A. Meyer. "Supply function equilibria in oligopoly under uncertainty." *Econometrica: Journal of the Econometric Society* (1989): 1243-1277.

X) Simultaneous auctions

XI) Combinatorial auctions

There is no textbook for Daniel Ershov's lectures. The lectures will cover the following topics using the papers listed below (*** means the paper is particularly important):

Lecture 1: Intro + Distance

***Agrawal, A., & Goldfarb A. (2008). Restructuring Research: Communications Costs and the Democratization of University Innovation. *The American Economic Review*, 98(4), 1578-1590

***Blum, B. S., & Goldfarb, A. (2006). Does the internet defy the law of gravity?. *Journal of international economics*, *70*(2), 384-405

***Ferreira, F., & Waldfogel, J. (2013). Pop internationalism: has half a century of world music trade displaced local culture?. *The Economic Journal*, *123*(569), 634-664

Gaspar, J., & Glaeser, E. L. (1998). Information technology and the future of cities. *Journal of urban economics*, *43*(1), 136-156

George, L. M., & Waldfogel, J. (2006). The New York Times and the market for local newspapers. *The American economic review*, *96*(1), 435-447

Lecture 2: Search

***Brynjolfsson, E., & Smith, M. D. (2000). Frictionless commerce? A comparison of Internet and conventional retailers. *Management science*, *46*(4), 563-585

***Chiou, L. (2017). Vertical integration and antitrust in search markets. *The Journal of Law, Economics, and Organization*

*** *Ellison, G., & Ellison, S. F. (2009). Search, obfuscation, and price elasticities on the internet. Econometrica, 77(2), 427-452*

***Hortaçsu, A., & Syverson, C. (2004). Product differentiation, search costs, and competition in the mutual fund industry: A case study of S&P 500 index funds. *The Quarterly Journal of Economics*, *119*(2), 403-456

Nelson, P. (1970). Information and consumer behavior. *Journal of political economy*, *78*(2), 311-329

Lecture 3: Copyright and IP

***Giorcelli, M., & Moser, P. (2017). Copyright and creativity: Evidence from italian operas

***Nagaraj, A. (2017). Does copyright affect reuse? Evidence from google books and wikipedia. *Management Science*

***Oberholzer-Gee, F., & Strumpf, K. (2007). The effect of file sharing on record sales: An empirical analysis. *Journal of political economy*, *115*(1), 1-42

Waldfogel, J. (2012). Copyright protection, technological change, and the quality of new products: Evidence from recorded music since Napster. *The journal of law and economics*, *55*(4), 715-740

Survey Paper:

Varian, H. R. (2005). Copying and copyright. *The Journal of Economic Perspectives*, *19*(2), 121-138

Lecture 4: Reputation Mechanisms

Banerjee, A. V. (1992). A simple model of herd behavior. *The Quarterly Journal of Economics*, *107*(3), 797-817

Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of marketing research*, *43*(3), 345-354

***Jin, G. Z., & Kato, A. (2006). Price, quality, and reputation: Evidence from an online field experiment. *The RAND Journal of Economics*, *37*(4), 983-1005

***Luca, M. (2017). Reviews, reputation, and revenue: The case of Yelp. com

***Luca, M., & Zervas, G. (2016). Fake it till you make it: Reputation, competition, and Yelp review fraud. *Management Science*, *62*(12), 3412-3427

***Edelman, B., Luca, M., & Svirsky, D. (2017). Racial discrimination in the sharing economy: Evidence from a field experiment. *American Economic Journal: Applied Economics*, *9*(2), 1-22

Survey Paper:

Tadelis, S. (2016). Reputation and feedback systems in online platform markets. *Annual Review of Economics*, *8*, 321-340

Lecture 5: Network Effects, Platform Competition, and Two Sided Markets

***Augereau, A., Greenstein, S., & Rysman, M. (2006). Coordination versus differentiation in a standards war: 56k modems. *The RAND Journal of Economics*, *37*(4), 887-909

***Brynjolfsson, E., & Kemerer, C. F. (1996). Network externalities in microcomputer software: An econometric analysis of the spreadsheet market. *Management Science*, *42*(12), 1627-1647

Hendel, I., Nevo, A., & Ortalo-Magné, F. (2009). The Relative Performance of Real Estate Marketing Platforms: MLS versus FSBOMadison. com. *American Economic Review*, *99*(5), 1878-1898

Lee, R. S. (2013). Vertical integration and exclusivity in platform and two-sided markets. *The American Economic Review*, *103*(7), 2960-3000

***Seamans, R., & Zhu, F. (2013). Responses to entry in multi-sided markets: The impact of Craigslist on local newspapers. *Management Science*, *60*(2), 476-493

***Tucker, C. (2008). Identifying formal and informal influence in technology adoption with network externalities. *Management Science*, *54*(12), 2024-2038

Survey Paper:

Rysman, M. (2009). The economics of two-sided markets. *The Journal of Economic Perspectives*, *23*(3), 125-143