

ECON 7050: Advanced Economic Theory

Fall 2021

Instructor: Professor Yongmin Chen

Class Time: TTH: 11:10-12:25

Office Hours: Thursday, 9:30-11:00 AM

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Course Description: This is the third graduate course in microeconomic theory. It contains several important topics that were not covered in the previous courses. It will also discuss additional contemporary topics in microeconomic Theory. The course aims to help students develop the ability and skills needed for building and analyzing economic models (especially for applied research).

Course Materials: The textbook is *Microeconomic Theory*, by Mas-Colell, Whinston, and Green. Other reading materials, including articles, are indicated below or will be added during the semester. I will also make available my lecture notes/slides. These lecture notes/slides and other course material that I create are to be used only by students who are enrolled in the course. You may not reproduce, distribute, or display them without my written permission.

Grading: Grades are based on homework and class participation (30%), an Exam (35%), and a Final Project (35%). Homework assignments should be submitted at or before 11AM on the indicated due date to receive credits. Each homework assignment will be graded on a scale from 0 to 5: 0 points for not handing it in on time, 2 points for poor performance (e.g., incomplete or low legibility), 4 points for good performance, and 5 points for excellent performance (thoughtful and neat).

Lecture Topics: Below is a tentative plan for the lectures. Changes will be announced in class during the semester and you are responsible for updating course information.

Topic 1: Market Power and Imperfect Competition

Weeks 1,2 8/24, 8/26, 8/31, 9/2

Required Readings: Ch. 12

Hw1: 12.B.4, 12.B.5, 12.B.9, 12.C.3, 12.C.9; **due on 8/31**

Hw2: 12.C.18, 12 D.2., 12 E.4., 12 E.7, 12G.1; **due on 9/7**

Topic 2 Pass-through and Differential Pricing

Week 3 9/7, 9/9

Hw3: Reviews of (1) and (2) below, **due on 9/9**. Each review is about 2 pages long, double spaced.

Required Readings:

(1) Weyl, E. Glen and Michal Fabinger. "Pass-Through as an Economic Tool"
JPE, 121 (2013): 528-583.

(2) Chen, Y. and M. Schwartz. "Differential Pricing when Costs Differ: A
Welfare Analysis", RAND, 2015

Topic 3 Adverse Selection, Signaling, and Screening

Weeks 4, 5 9/14, 9/16, 9/21, 9/23

Hw4: 13.B.2, 13.B.4, 13.C.1, 13.C.5; **due 9/28**.

Required Readings: Ch. 13

Topic 4 The Principal-Agent Problem and Applications

Weeks 6, 7, 8 9/28, 9/30, 10/5, 10/7, 10/12

Hw5: 14.B.4, 14.C.3, 14.C.7, 14.C.8; **due 10/12**.

Required Readings: Ch. 14

Exam Tuesday, Oct. 19.

Topic 5 Incomplete Contracts and Organization Design

Weeks 8, 9 10/14, 10/21

Hw6: Review of Grossman and Hart (1986) below, **due on 10/21**.

Required Readings:

- Grossman, S. and O. Hart, “The Costs and Benefits of Ownership”, JPE (1986), 691-719.

Additional Readings:

- Coase, R., “The Nature of the Firm,” *Economica* (1937), 386-405.
- Williamson, O.E., *The Economic Institutions of Capitalism*, 1985, New York: Free Press.
- Hart, O., “The Market Mechanism as an Incentive Mechanism”, *BELL* (1983), 366-382.
- Binmore, K., A. Rubinstein, and A. Wolinsky, “The Nash Bargaining Solution in Economic Modeling.” *RAND* (1986).
- Wouter Dessein, Andrea Galeotti, and Tano Santos, “Rational Inattention and Organizational Focus” *AER*, 2016
- Chen, Y. “Promises, Trust, and Contracts.” *Journal of Law, Economics, and Organization*, 2000.

Planning for the Final Project: The project can either

- (i) be a literature review on a microeconomics topic/issue, identifying the main research questions, discussing how they have been studied and the known results, and suggesting directions for future research;

Or

- (ii) propose and analyze a simple microeconomic model to provide a new economic insight.

Topic 6 Vertical Control and Exclusionary Contracts

Weeks, 10, 11 10/26, 10/28, 11/2, 11/4

Hw7: Reviews of (1) and (2) below, **due on 10/26;**

Hw8: Reviews of (3) and (4) below, **due on 11/2.**

1. Vertical Control
2. Contracts as a Barrier to Entry
3. Naked Exclusion
4. Recent Developments

Required Readings:

- (1) Chen, Y. “Oligopoly Price Discrimination and Resale Price Maintenance”, *RAND*, 1999.

- (2) Aghion, Philippe and Patrick Bolton, "Contracts as a Barrier to Entry," AER, 77(3), 1987.
- (3) Erasmussen, Eric, J. Mark Ramseyer, and John Wiley, "Naked Exclusion," AER, 1991.
- (4) Özlem Bedre-Defolie and Gary Biglaiser, "Contracts as a Barrier to Entry in Markets with Nonpivotal Buyers", AER, 107(7): 2041-2071, 2017.

Additional Readings:

- (5) Chen, Yongmin and David Sappington, "Exclusive Contracts, Innovation, and Welfare," American Economic Journals: Microeconomics, Vol. 3, 194-220, 2011.
- (6) Fumagalli, Chiara and Massimo Motta, "Exclusive Dealing and Entry when Buyers Compete," AER, 96(3), 2006.
- (7) Greenlee, Patrick, David Reitman, and David Sibley, "An Antitrust Analysis of Bundled Loyalty Discounts," International Journal of Industrial Organization, 2008.
- (8) Segal, Ilya and Michael Whinston, "Exclusive Contracts and the Protection of Investments," RAND, 2000.
- (9) Segal, Ilya and Michael Whinston, "Naked Exclusion: Comment," AER, 2000.
- (10) Spier, Kathryn and Michael Whinston, "On the Efficiency of Privately Stipulated Damages for Breach of Contract: Entry Barriers, Reliance and Renegotiation," RAND, 1995.
- (11) Simpson, John and Abraham Wickelgren, "Naked Exclusion, Efficient Breach, and Downstream Competition," AER, 2007.

Topic 7 Consumer Search and Competition: Homogeneous Products

Weeks 12, 13 11/9, 11/11, 11/16

Hw9: Reviews of Varian (1980) and Stahl (1989) below, **due 11/11**

- Information friction and price search: Stigler (1961)
- Price Search with a two-point distribution: Salop and Stiglitz
- Diamond's paradox
- Varian's model of sales
- Sequential price Search and oligopoly pricing: The Stahl model

Required Readings:

- Diamond, Peter. 1971. "A Model of Price Adjustment." Journal of Economic Theory, 3, 156-168.

- Salop, S. and J. Stiglitz, “Bargains and Ripoffs: A Model of Monopolistically Competitive Price Dispersion”, RES (1977), pp. 493-510.
- Stahl, Dale O. 1989. "Oligopolistic Pricing with Sequential Consumer Search." AER, 700-712.
- Varian, Hal. 1980. "A Model of Sales." American Economic Review, 70, 651-659
- Wolinsky, A. 1986. “True Monopolistic Competition as a Result of Imperfect Competition,” QJE, 101: 493-511.

Additional Readings:

- Armstrong, M. and Y. Chen, “Inattentive Consumers and Product Quality,” Journal of the European Economic Association, (2009), pp. 411-422.
- Armstrong, M, Vickers, J, and Zhou, J., “Prominence and Consumer Search”, RAND, 2009.
- Bagwell, K. and G. Ramey, “Coordination Economies, Advertising, and Search Behavior in Retail Markets”, AER (1994), 498-517.
- Chen, Y. and R. Rosenthal, “On the Use of Ceiling-price Commitments by Monopolists”, RAND (1996), 207-220.
- Chen, Y. and T. Zhang, “Equilibrium Price Dispersion with Heterogeneous Searchers,” International Journal of Industrial Organization, 2011.
- Chen, Y. and T. Zhang, “Entry and Welfare in Search Markets”, Economic Journal, 2017.
- Reinganum, J., “A simple Model of Equilibrium Price Dispersion”, JPE (1979), pp. 851-858.
- Baye, Michael and John Morgan. 2001. "Information Gatekeepers on the Internet and the Competitiveness of Homogeneous Product Markets." AER, 91, 454-474.
- Baye, M.R. and J. Morgan. 2004. "Price Dispersion in the Lab and on the Internet: Theory and Evidence." RAND, 35(3), 449-466.
- Burdett, Kenneth and Kenneth L. Judd. 1983. "Equilibrium Price Dispersion." Econometrica, 51, 955-969.
- Zhou, J. 2014. “Multiproduct Search and the Joint Search Effect”, AER.

Topic 8 Consumer Search and Competition: Differentiated Products

Weeks 13, 15 11/18, 11/30

Hw10: Reviews of Wolinsky (1986) and Bar-Issac et al. (2012), **due 11/18**

- Looking for the best match: the Wolinsky model
- Search and product design
- Prominence and consumer search

Required Readings:

- Wolinsky, A. 1986. “True Monopolistic Competition as a Result of Imperfect Competition,” QJE, 101: 493-511.
- Bar-Isaac, H., Caruana, G. and V. Cunat, “Search, Design and Market Structure”, AER, 2012.

Topic 9 Search Platforms

Week 15 12/2

Hw11: Reviews of Athey and Ellison (2011) and Chen and He (2011), **due 11/30**

- Platforms as information intermediaries in the digital economy
- Platform bias and antitrust issues
- Platforms, consumer data, and privacy

Required Readings:

- Athey, S. and G. Ellison, 2011, “Position Auctions with Consumer Search”, QJE.
- Chen, Y. and C. He, 2011. “Paid Placement: Advertising and Search on the Internet,” Economic Journal.
- Eliaz, K. and Spiegler, R. (2011). "A Simple Model of Search Engine Pricing." Economic Journal, Vol.121, pp F329-39.

Additional Readings:

- Edelman, B. and J. Wright (2014) “Price Coherence and Adverse Intermediation”, QJE.
- *de Cornière, A., and G. Taylor (2013) "Integration and Search Engine Bias," RAND
- Dinerstein, M., Einav, L., Levin, J. and N. Sundaresany, “Consumer Price Search and Platform Design in Internet Commerce”, AER, 2018.
- Hagiu, A., and B. Jullien, "Search Diversion and Platform Competition," IJIO, 2014.
- Armstrong, M, Vickers, J, and Zhou, J., “Prominence and Consumer Search”, RAND, 2009.
- Rhodes, Andrew. 2011. "Can Prominence Matter Even in an Almost Frictionless Market?" Economic Journal 121: 297--308.

- White, Alexander. 2013. "Search Engines: Left Side Quality Versus Right Side Profits." International Journal of Industrial Organization 31: 690-701.

- **Completing the final product**

Week 16 12/7, 12/9

Final Project Due: Thursday, 12/11.

University Policies:

Classroom Behavior

Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. For more information, see the policies on [classroom behavior](#) and the [Student Conduct & Conflict Resolution policies](#).

Requirements for COVID-19

As a matter of public health and safety due to the pandemic, all members of the CU Boulder community and all visitors to campus must follow university, department and building requirements and all public health orders in place to reduce the risk of spreading infectious disease. Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to [Student Conduct and Conflict Resolution](#). For more information, see the policy on [classroom behavior](#) and the [Student Code of Conduct](#). If you require accommodation because a disability prevents you from fulfilling these safety measures, please follow the steps in the “Accommodation for Disabilities” statement on this syllabus.

As of Aug. 13, 2021, CU Boulder has returned to requiring masks in classrooms and laboratories regardless of vaccination status. This requirement is a temporary precaution during the delta surge to supplement CU Boulder’s COVID-19 vaccine requirement. Exemptions include individuals who cannot medically tolerate a face covering, as well as those who are hearing-impaired or otherwise disabled or who are communicating with someone who is hearing-impaired or otherwise disabled and where the ability to see the mouth is essential to communication. If you qualify for a mask-related accommodation, please follow the steps in the “Accommodation for Disabilities” statement on this syllabus. In addition, vaccinated

instructional faculty who are engaged in an indoor instructional activity and are separated by at least 6 feet from the nearest person are exempt from wearing masks if they so choose.

Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home.

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code academic integrity policy. Violations of the Honor Code may include, but are not limited to: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found on the [Honor Code website](#).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to fostering an inclusive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, or protected-class discrimination or harassment by or against members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or email cureport@colorado.edu. Information about OIEC, university policies, [reporting options](#), and the campus resources can be found on the [OIEC website](#).

Please know that faculty and graduate instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, dating and domestic violence, stalking, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about their rights, support resources, and reporting options.

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, a student should notify the faculty in writing within the first two weeks of the semester if there is such a conflict. See the [campus policy regarding religious observances](#) for full details.

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