

## Economics 667(L01) (Industrial Organization)

Instructor: J. Church  
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Lecture Location: SS 423  
Lecture Days/Time: TR 9:30-10:45

Office: Ss 442  
Office Hours: W 14:00-16:00

(Winter 2020)

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### Course Description:

The central organizing principle of this course is market power: its acquisition, maintenance, and exercise. The course will focus on both theory and application, with an emphasis on how industrial organization does, and should, inform competition policy and antitrust law. Antitrust law attempts to prevent behaviour which leads to the creation, enhancement, or maintenance of market power. The focus will be on appropriate enforcement policy with respect to collusion, mergers, abuse of dominant position/monopolization, and vertical contracting/restraints.

### Tentative Course Outline:

1. Introduction and Exercise of Market Power
  - a. Competition policy in Canada and current antitrust issues
  - b. Theory of the firm
  - c. Exercise of market power: source and effects
    - i. Monopoly, dominant firm, and durable goods monopolist
    - ii. Applications: Two-sided platforms, electricity in Alberta, essential facilities
  - d. Product quality, selection, and advertising
  - e. Price discrimination and monopoly bundling and tying
2. Oligopoly and Game Theory
  - a. Nash equilibrium
  - b. Classic oligopoly
    - i. Cournot
      1. Free entry
    - ii. Bertrand
      1. Capacity Constraints
      2. Product Differentiation
  - c. Supply function equilibria
  - d. Bayesian-Nash equilibria
    - i. Application: HTR
3. Mergers, Market Definition, and Product Differentiation
  - a. Product Differentiation
    - i. Hotelling
    - ii. Logit
  - b. Identifying Market Power
    - i. Market definition
    - ii. SCP

- iii. Monopoly profits
  - c. Applications: Merger analysis
    - i. Market definition and concentration: structural presumptions
    - ii. Upward pricing pressure
    - iii. Merger simulation
- 4. Market Structure and Strategic Behaviour
  - a. Commitments, threats, strategic moves, and subgame perfection
  - b. Entry deterrence
    - i. Application: MSA v. TAU and Abuse of dominance
  - c. Vertical mergers
  - d. Tying
  - e. Exclusive dealing
  - f. Collusion
  - g. Predation

A detailed list of topics and readings will be provided.

**Required Textbook(s):**

Church, J. 2006. *The Impact of Vertical and Conglomerate Mergers on Competition* Brussels: European Commission. [Recommended for certain chapters. Available online at <http://bookshop.europa.eu/en/the-impact-of-vertical-and-conglomerate-mergers-on-competition-pbKD7105158/>]

Church, J., and R. Ware. 2000. *Industrial Organization: A Strategic Approach*. San Francisco: McGraw-Hill. [Recommended for certain chapters. Available online at <http://homepages.ucalgary.ca/~jrchurch/page4/page5/page5.html>.]

Tirole, J. 1988. *Theory of Industrial Organization*. Cambridge, Mass.: MIT Press.

Church and Ware is an advanced undergraduate text that has an antitrust focus and features real world applications/examples. It is similar in coverage to the standard graduate textbook (Tirole). My study on vertical mergers substantially updates the material on anticompetitive strategies in Church and Ware. In addition, the third volume of the Handbook of Industrial Organization was published in 2007. Individual chapters of it, if necessary, can be purchased online.

**Books on Reserve:**

ABA Section of Antitrust Law. 2008. *Issues in Competition Law and Policy*. Chicago: ABA Publishing. Volumes I, II, and III.

ABA Section of Antitrust Law. 2017. *Proving Antitrust Damages*. Third Edition. Chicago: ABA Publishing.

ABA Section of Antitrust Law. 2017. *Handbook on Antitrust in Technology Industries*. Third Edition. Chicago: ABA Publishing.

Anderson, S., A. Palma, and J.-F. Thisse. 1992. *Discrete Choice Theory of Product Differentiation*. Cambridge, Mass.: MIT Press.

Armstrong, M, and R. Porter. 2007. *Handbook of Industrial Organization*. Amsterdam: North-Holland. Volume 3.

Blair, R., and D. Sokol, eds. 2015. *The Oxford Handbook of International Antitrust Economics*. Oxford: Oxford University Press, Volumes 1 and II.

Blair, R., and D. Sokol, eds. 2017. *The Cambridge Handbook of Antitrust, Intellectual Property, and High Tech*. Cambridge: Cambridge University Press.

Fumagalli, C., M. Matto, and C. Calcagno. 2018. *Exclusionary Practices: The Economics of Monopolisation and Abuse of Dominance*. Cambridge: Cambridge University Press.

Gibbons, R. 1992. *Game Theory for Applied Economists* Princeton: Princeton University Press.

Hovenkamp, H. 2015. *Federal Antitrust Policy*. 5th Edition. St. Paul, Min.: West.

- Kaplow, L. 2013. *Competition Policy and Price Fixing*. Princeton: Princeton University Press.
- Marshall, R. and L. Marx. 2012. *The Economics of Collusion*. Cambridge: MIT Press.
- Mas-Colell, A., M. D. Whinston and R. Green. 1995. *Microeconomic Theory*. Oxford: Oxford University Press.
- Niels, G, H.Jenkins, and J. Kavanagh. 2016. *Economics for Competition Lawyers*. 2nd Edition. Oxford: Oxford University Press.
- Parcu, P., G. Monti, and M. Botta, Eds. 2017. *Abuse of Dominance in EU Competition Law: Emerging Trends*. Edward Elgar.
- Peitz, M. and J. Waldfoegel, eds. 2012. *The Oxford Handbook of The Digital Economy*, Oxford: Oxford University Press.
- Schmalensee, R. and R. Willig, ed. 1989. *Handbook of Industrial Organization*. Amsterdam: North-Holland. Volume 1.
- Slottje, D., ed. 2003. *Measuring Market Power*. Amsterdam: Elsevier.
- Stucke, M. and A. Grunes. 2016. *Big Data and Competition Policy*. Oxford: Oxford University Press.
- Stikeman Elliot. 2017. *2018 Competition Act & Commentary*. Markham, Ontario: LexisNexis.
- Train, K. 2009. *Discrete Choice Methods with Simulation*. Second Edition. Cambridge: MIT Press.

### Desire2Learn:

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails go to your University of Calgary e-mail addresses only.

### Grade Determination/Assessment:

MIDTERM EXAM	25%
FINAL EXAMINATION	50%
Problem Sets	<u>25%</u>
	100%

### Grade Determination and Final Examination Details

Department of Economics Criteria for Letter Grades. Economics professors use the following criteria when assigning letter grades:

Grade Point Value	Description
4.00	Outstanding
4.00	Excellent-superior performance, showing-comprehensive understanding of subject matter
3.70	Very good performance
3.30	Good performance
3.00	Satisfactory performance
2.70	Minimum pass for students in the Faculty of Graduate Studies
2.30	All grades below "B-" are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements. Individual programs may require a higher passing grade.

As per the Writing Across the Curriculum Statement in the Calendar, writing and grading thereof will be a factor in the evaluation of student work.

Any student work which remains undistributed after the last day of classes will be available to students through the instructor's office during his office hours.

Students must receive a passing grade on the final exam to pass the course. The final examination will be comprehensive and scheduled by the Department.

Tests and exams will not involve multiple choice questions. Calculators and communication devices are not allowed in exam rooms.

The exact date for the in-class midterm will be announced at least one week in advance.

A letter grade will be awarded based on the numeric average of the problem sets.

### **Absence from a Test/Exam**

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES under any circumstances, nor may the quizzes be written early. Students unable to write the quizzes because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned. If a student cannot write their final exam on the date assigned by the Department, they need to arrange for a deferred exam with the department.

### **Reappraisal of Grades and Intellectual Honesty:**

*For reappraisal of graded term work, see Calendar I.2*

<http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

*For reappraisal of final grade, see Calendar I.3*

<http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

*Statement of Intellectual Dishonesty, see Calendar K.4*

<http://www.ucalgary.ca/pubs/calendar/current/k-4.html>

*Plagiarism and Other Academic Misconduct, see Calendar K.5*

<http://www.ucalgary.ca/pubs/calendar/current/k-5.html>

### **Academic Accommodations:**

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

### **Freedom of Information and Protection of Privacy (FOIP) Act:**

Personal information is collected in accordance with FOIP. Assignments can only be returned to the student and will be accessible only to authorized faculty and staff. For more information, see <http://www.ucalgary.ca/legalservices/files/legalservices/faq-students.pdf> and [http://www.ucalgary.ca/legalservices/files/legalservices/faq-faculty\\_0.pdf](http://www.ucalgary.ca/legalservices/files/legalservices/faq-faculty_0.pdf).

**Internet and Electronic Communication Device information:**

The use of cell phones for any purpose in class is prohibited. Computers and tablets may be used for note taking only unless otherwise authorized by the instructor.

**Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at [www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf](http://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

**Important Dates:**

Please check: <http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>

**Student Organizations:**

Faculty of Grad Studies website: <http://grad.ucalgary.ca/home>

Graduate Students Association: <http://gsa.ucalgary.ca/>

Professional Development for Grad Students

Workshops and resources can be found at <http://www.ucalgary.ca/mygradskills/>

Economics Graduate Association: <http://econ.ucalgary.ca/ega/>

**Student Support and Resources:**

- See <https://www.ucalgary.ca/registrar/registration/course-outlines> for information on campus mental health resources, the Student Ombuds' Office, Student Success Centre, Safewalk, and Emergency Evacuation and Assembly.
- Online writing resources are available at <https://ucalgary.ca/student-services/student-success/writing-support>.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Library Block.

**Notes:**

1. Students are responsible for all assigned material, e.g., supplementary material posted on D2L, regardless of whether or not the material was covered in class.

JRC

2018-12-19

UNIVERSITY OF CALGARY

DEPARTMENT OF ECONOMICS

ECONOMICS 667

AMENDMENT TO COURSE OUTLINE

J. Church

Winter 2020

Confirming to University policy in response to the COVID-19 virus the final exam will be an open book, take-home final, administered through D2L. It will be due at the same time your scheduled final exam was to end, i.e., 15:00 April 27. It will be available 24 hours before that on D2L. It will be handed in using Dropbox on D2L.