

# Department of Economics Faculty of Arts

## Economics 471 (L01) Industrial Organization

Instructor: Aidan Hollis Lecture Location: TRB 101

Phone: 403-220-5861 Lecture Days/Time: TR 14:00-15:15

Email: ahollis@ucalgary.ca

Office: ZOOM Delivery

Office Hours: T 15:30-16:30 or by appointment Fall 2021

Tan 202

## **Course Description:**

The objective of this course is to introduce the theory of industrial organization. Industrial organization is concerned with the functioning of imperfectly competitive markets and the behaviour of firms in these markets. The course is organized around market power: its exercise, creation, enhancement, maintenance, and effects.

#### **Course Learning Outcomes:**

Students who successfully complete this course will:

- Know and understand the sources of market power and the methodologies used to assess whether firms have market power, including market definition.
- Know the effect on efficiency of the exercise of market power and the normative foundations
  for the control of its exercise and prohibitions on conduct that creates, enhances, or maintains
  market power.
- Know and understand the requirements for price discrimination, the incentive for price discrimination, its effects and recognize it in practice.
- Know and understand the effects of competitor supply and durability on the exercise of market power by a dominant firm, including the Coase conjecture and conduct that mitigates its effect on market power.
- Know and be able to apply the following game theoretic solution concepts: dominant strategies, iterated elimination of dominated strategies, rationalizability, Nash equilibrium, subgame perfect Nash equilibrium, Bayesian Nash equilibrium, and Perfect Bayesian equilibrium.
- Demonstrate familiarity with classic oligopoly models and the factors responsible for the exercise of market power in oligopoly.
- Differentiate between noncredible threats and credible threats and the role of a strategic move in converting noncredible threats to credible threats.
- Recognize and differentiate between barriers to entry and profitable entry deterrence; be able to assess the effect of firm conduct on entry deterrence.
- Differentiate between the unilateral and coordinated exercise of market power and determine the likelihood of the coordinated exercise of market power.
- Analyse conduct for its effect on market power, differentiating between the exercise of market power and conduct that creates, enhances, and maintains market power.
- Develop a basic familiarity with antitrust laws, enforcement, and institutions.
- Develop a basic familiarity with patents and innovation economics.

#### **Course Outline:**

The course will follow the following topics:

- 1. Foundations
- a. Introduction and Competitive Markets
- b. Welfare Economics of Market Power
- 2. Monopoly
- a. Market Power and Dominant Firms
- b. Non-Linear Pricing and Price Discrimination
- 3. Oligopoly
- a. Game Theory
- b. Oligopoly
- c. Collusion and Cartels
- 4. Strategic Behaviour
- a. Entry Deterrence
- b. Predation
- 5. Innovation and Patents (Time Permitting)

## Prerequisites/corequisites:

ECON357 and ECON359

#### Required Textbook(s):

Church, J., and R. Ware. 2000. Industrial Organization: A Strategic Approach. San Francisco: McGrawHill. Available online at https://works.bepress.com/jeffrey\_church/23/.

## **Online Delivery:**

This course will be delivered in person, although for the present office hours will be online only.

In order to remotely participate in online office hours, students will need to have: computer with a current and updated operating system (macOS or Windows will work with all university-supported online learning technologies), a current and updated web browser installed – the latest versions of Firefox, Safari, Chrome or Edge will help to avoid compatibility issues, secure and reliable internet, microphone / headphones, webcam (optional).

#### Desire2Learn:

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

## **Lectures:**

Lectures will be delivered in person at the Registrar scheduled times and location

#### **Grade Determination and Final Examination Details:**

Midterm	20%
Assignments (4)	40%
Final Exam	40%
	100%

The official grading system will be used. See <a href="http://www.ucalgary.ca/pubs/calendar/current/f-1-1.html">http://www.ucalgary.ca/pubs/calendar/current/f-1-1.html</a>.

Students must receive a passing grade on the final exam to pass the course.

If a student's letter grade on the final exam exceeds their midterm(s) letter grade, the weight of the midterm(s) may be transferred to the final exam at the discretion of the instructor. The student must have written the midterm(s) or provided supporting documentation for the absence(s) such as a medical note or statutory declaration.

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. See <a href="https://www.ucalgary.ca/pubs/calendar/current/e-2.html">https://www.ucalgary.ca/pubs/calendar/current/e-2.html</a>.

Course material dealing with a particular assignment will typically be covered in class at least 7 days before the assignment is due; thus, assignments can be completed at any time up to and including the due date. Given these factors, only situations where someone can document illness or domestic affliction for an extended period (i.e., the entire 7 days prior to the due date) would possibly warrant shifting the assignment weight to the final exam. Furthermore, technical problems can be expected to occur with computer systems (and internet availability) so it may be a good idea to not wait until the last minute to submit your assignment.

The midterm will be in class on November 2, 2021.

The final examination will be comprehensive and scheduled by the Registrar. The exam is designed and intended to be completed in two hours. The exam will be closed book.

If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam <a href="https://www.ucalgary.ca/pubs/calendar/current/g-6.html">https://www.ucalgary.ca/pubs/calendar/current/g-6.html</a>. Under no circumstance will this be accommodated by the Department.

Tests and exams will not include multiple choice questions and / or fill-in-blank questions.

THERE WILL BE NO MAKEUP OR DEFERRED MIDTERM under any circumstances, nor may the midterm be written early. Students unable to write the midterm 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.

## 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 <a href="http://www.ucalgary.ca/pubs/calendar/current/i-3.html">http://www.ucalgary.ca/pubs/calendar/current/i-3.html</a>

## **Academic Misconduct**

Academic Misconduct refers to student behavior that compromises proper assessment of students' academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

Student committing academic misconduct during the final exam will not receive a passing grade for the course.

For information on the Student Academic Misconduct Policy, Procedure and Academic Integrity, please visit: https://www.ucalgary.ca/pubs/calendar/current/k-3.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

https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure

## 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 <a href="https://www.ucalgary.ca/legal-services/access-information-privacy">https://www.ucalgary.ca/legal-services/access-information-privacy</a>

## **Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at <a href="https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy">https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy</a> Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

#### **Recording of Lectures:**

Recording of lectures is prohibited, except for audio recordings authorized as an accommodation by SAS or an audio recording for individual private study and only with the written permission of the instructor. Any unauthorized electronic or mechanical recording of lectures, their transcription, copying, or

distribution, constitutes academic misconduct. See <a href="https://www.ucalgary.ca/pubs/calendar/current/e-6.html">https://www.ucalgary.ca/pubs/calendar/current/e-6.html</a>.

## **Important Dates:**

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

## **Student Organizations:**

Faculty of Arts Students' Association (F.A.S.A.):

Economics Department Representative E-mail: <a href="mailto:econrep@fasaucalgary.ca">econrep@fasaucalgary.ca</a> Website: <a href="mailto:www.fasaucalgary.ca">www.fasaucalgary.ca</a>.

Society of Undergraduates in Economics: https://www.ucalgarysue.com/

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students to succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career events such as Industry Night and information sessions, mentorship programs, and social events for members. They invite you to join by contacting SUE at societyofundergradsineconomics@gmail.com.

## **Faculty of Arts Program Advising and Student Information Resources:**

- Have a question, but not sure where to start? The Arts Students' Centre is your information
  resource for everything in Arts! Call them at 403-220-3580, or email them at
  <a href="mailto:artsads@ucalgary.ca">artsads@ucalgary.ca</a>. You can also visit the Faculty of Arts website at
  <a href="http://arts.ucalgary.ca/undergraduate">http://arts.ucalgary.ca/undergraduate</a>, which has detailed information on common academic
  concerns, including program planning and advice.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625].

## **Student Support and Resources:**

- See <a href="https://www.ucalgary.ca/registrar/registration/course-outlines">https://www.ucalgary.ca/registrar/registration/course-outlines</a> 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 <a href="https://ucalgary.ca/student-services/student-success/writing-support">https://ucalgary.ca/student-services/student-success/writing-support</a>.

#### 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.

AMH 2021-08-03