

Industrial Organization
ECONOMICS EC3364G-001
Department of Economics
Western University

Instructor: Tai-Yeong Chung

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Office Hours: Mon. 11:00 – noon and Wed. 1:00 – 2:00

Class meeting times and location: Mon. 9:30 - 10:30 and Wed. 9:30 - 11:30; UCC 67

Undergraduate inquiries: 519-661-3507 SSC Room 4075 or econugrd@uwo.ca

Registration

You are responsible for ensuring you are registered in the correct courses. If you are not registered in a course, the Department will not release any of your marks until your registration is corrected. You may check your timetable by using the Login on the Student Services website at <https://student.uwo.ca>. If you notice a problem, please contact your Faculty Academic Counsellor immediately.

Prerequisite Note

The prerequisite for this course is **Economics 2261A/B** (Intermediate Microeconomic Theory II)

Prerequisite(s) for your course found at:

http://www.westerncalendar.uwo.ca/Courses.cfm?CourseAcadCalendarID=MAIN_004496_1&SelectedCalendar=Live&ArchiveID=

You are responsible for ensuring that you have successfully completed all course prerequisites, and that you have not taken an anti-requisite course. Lack of pre-requisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed from it at any time and you will receive no adjustment to your fees. This decision cannot be appealed.

If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record, but will ensure that spaces become available for students who require the course in question for graduation.

Course Objectives:

Industrial organization studies firms and markets. It examines strategies of firms and their interactions in imperfectly competitive markets. Firms' price strategies include price discrimination and dynamic pricing. Non-price strategies include product differentiation, advertising, contracts, merger, and entry deterrence. We will also learn competition policies.

Course Learning Outcomes:

At the end of the course and having completed the essential reading and activities, students should be able to:

- examine pricing/non-pricing strategies by firms and their welfare implications
- apply analytical models of firm behavior and strategic interaction to evaluate various business practices, including collusion, entry deterrence, product differentiation, price discrimination and merger
- explain the basic determinants of market structure and understand key issues in competition policy and regulation.

Text:

Luis Cabral, Introduction to Industrial Organization, 2nd edition, MIT Press, 2017 (required)

Grading:

Assignments:	15 points
Midterm Exam:	20 points
Final Exam:	40 points
Essay:	20 points
Class participation:	5 points.

All assignments and essays are due at the beginning of the class on the due date. Late essays will be penalized 5 points per day late. For more details, please check the class web page at OWL.

Course description:

This course takes a formal approach to analyzing the way firms make production and sales decisions and interact strategically with each other in the marketplace. As this course is for upper-year undergraduate honor-level students, it will try to conduct rigorous analyses that are commensurate with such a level.

We begin with a study of optimal pricing policies, including versioning, bundling, and related market segmentation strategies. In the second part of the course, we apply game theory to the study of oligopoly interaction, focusing on pricing and output strategies in a dynamic setting. Finally, we analyze strategies for firm dominance, especially through the deterrence of potential competition. The list of such strategies includes capacity expansion, product proliferation, and exclusive dealing contracts.

The main goal of the course is to develop the basic intuition for pricing and other forms of strategic behavior on the part of firms, both when faced with complex patterns of consumer demand and when faced with strategic competitors. Readings in the textbook will provide background and introduction to a variety of topics, many of which will be covered in class in greater depth. Problem sets will focus on formal analysis. Occasional supplemental readings will provide additional motivation and opportunities to develop intuition.

Topics:

- 1 What Is Industrial Organization?

PART ONE: Microeconomics Foundations

- 2 Consumers
- 3 Firms
- 4 Competition, Equilibrium, and Efficiency
- 5 Market Failure and Public Policy
- 6 Price Discrimination

PART TWO: Oligopoly

- 7 Games and Strategies
- 8 Oligopoly
- 9 Collusion and Price Wars

PART THREE: Entry and Market Structure

- 10 Market Structure
- 11 Horizontal Mergers
- 12 Market Foreclosure

PART FOUR: Non-price Strategies

- 13 Vertical Relations
- 14 Product Differentiation

Please Note
Department Policies for 2019-2020

Remember that the University expects all students to take responsibility for their own Academic Programs. Students should also check their registration to ensure they are enrolled in the correct courses.

1. Guidelines and policies for the Faculty of Social Science and the Department of Economics are posted online in the current Western Academic Calendar at:
<http://westerncalendar.uwo.ca>.
2. Students must familiarize themselves with the “Rules of Conduct for Examinations”
http://www.uwo.ca/univsec/pdf/academic_policies/exam/administration.pdf.
3. **Cheating as an academic offence:** Students are responsible for understanding what it means to “cheat”. The Department of Economics treats cheating incidents very seriously and will investigate any suspect behavior. Students found guilty will incur penalties that could include a failing grade or from future registration in other Economics courses or programs. The University may impose further penalties such as a notation on an official academic transcript, suspension or expulsion.
4. **Plagiarism:** Students must write their essays and assignments in their own words. When taking an idea/passage from another author, it must be acknowledged with quotation marks where appropriate and referenced with footnotes or citations. Plagiarism is an academic offence (see Scholastic Discipline for Undergraduate Students in the Western Calendar at http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryId=1&SelectedCalendar=Live&ArchiveID=#Page_20).

Western University uses software to check for plagiarism and students may be required to electronically submit their work. Those found guilty will be penalized as noted in point 3.

5. It is a Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students must submit assignments in class or to the instructor during office hours.
6. When appealing a mark, students should refer to the Student Academic Appeals section in the current Western Academic Calendar at:
http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryId=1&SelectedCalendar=Live&ArchiveID=#Page_14
Please note the relevant deadlines.

The Department will not consider an appeal unless an attempt has been made to settle the matter with the instructor first. Students who remain dissatisfied with the outcome may proceed with a written appeal (e-mails are not acceptable) to the Undergraduate Director in Economics, stating the reasons for their appeal. A checklist is provided at:
http://economics.uwo.ca/undergraduate/program_counselling/responsibilities_policies.html#appeals.

7. Systematic adjustments of a class grade distribution (either up or down) can occur in Economics courses. The fact that grades have been adjusted is **not** grounds for an appeal.
8. Note the following add and drop deadlines:

Deadline to <u>add</u> a second term half course:	January 14, 2020
Deadline to <u>drop</u> a second term half course:	March 7, 2020
9. Faculty of Social Science policy states that oversleeping or misreading an exam schedule is NOT grounds for a makeup. This rule applies to midterm and final exams in the Department of Economics.

Policy on Tests, Final Exams and on Missed Academic Responsibilities

Students who proceed to write a test or examination must be prepared to accept the mark. Rewriting tests or examinations, or retroactive reweighting of marks, is **not** permitted. Students must book travel arrangements AFTER final exam dates have been posted; travel is not an acceptable excuse for absence from a final exam.

Students who are temporarily unable to meet academic requirements due to extenuating circumstances can follow Western University procedures to request academic consideration through the following routes:

- a) Submit a Self-Reported Absence form if the conditions for submission are met (e.g., only for exams or assessments worth 30% or less of the course mark; not applicable to final exams; maximum 2 self-reported absences per academic year; see [link](#) for full list of conditions and info).

If the conditions for submission of a Self-Reported Absence form are not met, then:

- b) For medical absences, submit a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner along with a request for academic consideration to Academic Counselling in the student's home Faculty (see [link](#) for full info) ; or
- c) For non-medical absences (e.g., religious or compassionate), submit appropriate documentation to Academic Counselling in the student's home Faculty (see [link](#) for full info).

It is strongly recommended that students notify their instructors as soon as possible. University policy is that students **must** communicate with their instructors no later than **24 hours** after the end of the period covered by either the self-reported absence or SMC, or immediately upon their return following a documented absence. Failure to follow University policy and procedures may result in denial of academic accommodation and a grade of zero. Students should also set up an appointment to meet with their instructor as soon as possible. If the instructor is not available, send an email message, copying the Undergraduate Coordinator at econugrd@uwo.ca.

Note: Academic consideration is not normally intended for long-term, recurring absences, an existing disability, or high levels of stress related to academic performance. In such cases, students should consult their academic counsellor. See [link](#) for full information.

In all cases, if the documentation submitted to request academic consideration is not acceptable, students will receive a grade of zero for the missed test, exam, or assignment.

For full information about Western University's policies and procedures for student absences and requests for academic consideration, please visit this [link](#).

Policies Regarding Academic Accommodation

The Faculty of Social Science's policies regarding academic accommodation is found at http://counselling.ssc.uwo.ca/procedures/having_problems/index.html.

"Academic Rights and Responsibilities" are also outlined in the Western Calendar at <http://westerncalendar.uwo.ca/PolicyPages.cfm?PolicyCategoryID=1&command=showCategory&SelectedCalendar=Live&ArchiveID=>. Claiming that "you didn't know what to do" is not an acceptable excuse for not following the stated procedures.

Policy Regarding Class Attendance

If the instructor deems a student's class attendance as unsatisfactory, that student may be prohibited from writing the final examination. If there is intent to make use of this University policy, the student will be notified in writing.

Statement on Mental Health and Support Services

Students under emotional/mental distress should visit http://uwo.ca/health/mental_wellbeing/ for more information and a complete list of resources on how to obtain help.

Guidelines for Essay Courses

Essay Courses¹

An essay course is a course in which the cumulative amount of written work, excluding written work in examinations, is at least 2,500 words for a half course.

To pass an essay course students must exhibit a minimal level of competence in essay writing in addition to comprehension of the course content.

English Language Proficiency for Assignment of Grades²

Written work that demonstrates a lack of English proficiency will be failed or, at the discretion of the instructor, returned to the student for revision to an acceptable level.

To foster competence in the English language, *all instructors will take English proficiency into account when marking*. This policy applies to all courses, not only essay courses.

Recycling of Assignments

Students are prohibited from handing in the same paper for two different courses. Doing so is considered a scholastic offence and will be subjected to academic penalties.

Plagiarism

Plagiarism is defined as “the act or an instance of copying or stealing another’s words or ideas and attributing them as one’s own.”³

Plagiarism applies to ALL assignments including essays, reports, diagrams, statistical tables, and computer projects. Examples of plagiarism include:⁴

- Submitting someone else’s work as your own
- Buying a paper from a mill, website or other source and submitting it as your own
- Copying sentences, phrases, paragraphs, or ideas from someone else’s work, published or unpublished, without citing them
- Replacing selected words from a passage and using it as your own without citing them
- Copying multimedia (graphics, audio, video, internet streams), computer programs, music compositions, graphs, or charts from someone else’s work without citing them
- Piecing together phrases and ideas from a variety of sources to without citing them
- Building on someone else’s ideas or phrases without citing them

Plagiarism is a serious scholastic offence. Possible consequences of plagiarism include a mark of 0% on the assignment, a mark of 0% for the course, and expulsion from the university.

¹From the UWO Academic Handbook. See http://www.uwo.ca/univsec/pdf/academic_policies/registration_progression_grad/coursenumbering.pdf

² From the UWO Academic Handbook. See http://www.uwo.ca/univsec/pdf/academic_policies/exam/english.pdf

³Excerpted from HC Black, *Black’s Law Dictionary*, West Publishing Co., 1999, 7th ed., p. 1170.

⁴ From the San José State University Plagiarism Tutorial <http://tutorials.sjlibrary.org/tutorial/plagiarism/>

Instructors may require students to submit written work electronically to <http://www.turnitin.com>. This is a service that assists instructors in detecting plagiarism.

Students seeking further guidance on avoiding plagiarism should consult their instructor. Claiming ignorance is not an acceptable excuse.

The key to avoiding plagiarism is to correctly cite reference sources.

Referencing and Citation Guidelines

The Economics Department has adopted the citation guidelines used in *The Chicago Manual of Style*, 16th edition. Chicago: University of Chicago Press, 2010. An online version is available from Western Libraries <http://www.lib.uwo.ca>. Search the catalogue by title “Chicago Manual of Style.” For off-campus access, use the *OffCampus Access* sign-in on the Library’s homepage.

Economics papers often use the **author-date** style of references. Further details and examples of this style are available in chapter 15 of the *Chicago Manual of Style Online*. See also the handy “Chicago-Style Citation Quick Guide” under Tools on the homepage.

In the body of an essay, in-text citations list the last names of the authors of the piece that are referenced, the year of publication, and, where relevant, page numbers. In-text citations refer the reader to a complete list of bibliographic references at the end of the essay. Papers that cite multiple works by the same author(s) with the same publication year should add a lower case letter after the date in both the in-text citation and References (e.g., 1993a and 1993b). In doing so, the in-text citation points the reader to the relevant work.

Examples of in-text citations:

Diamond (1981, 1982) and Mortensen (1982a, 1982b) find these externalities can cause an inefficient level of search activity...

The “new view of unemployment” which emerged during the 1970s emphasized the importance of turnover in the labour force and the brief duration of many employments spells (Hall 1970, 1972; Perry 1972; Marston 1976).

The primary objectives of the LMAS are “1. To provide measures of the dynamic...the Labour Force Survey” (Statistics Canada 1990, 5).

The list of references at the end of the essay should be titled References or Works Cited. It provides complete bibliographic information about each source cited. In addition, students should also provide adequate referencing of any data sources. This should be done in a data appendix following the text of the paper and before the References.

Below are examples of the author-date style. For sources with two or more authors, only the first author’s name is inverted and a comma appears before and after the first author’s given name or initial.

1. BOOKS:

Wonnacott, Thomas, and Ronald Wonnacott. 1984. *Introductory Statistics for Business and Economics*. 3rd edition. Toronto: John Wiley & Sons.

2. JOURNAL ARTICLES OR ARTICLES IN A BANK REVIEW:

Geweke, John F., and David E. Runkle. 1995. "A Fine Time for Monetary Policy." *Federal Reserve Bank of Minneapolis Quarterly Review* 19: 18-31.

3. GOVERNMENT PUBLICATIONS:

Statistics Canada. 1983. *Logging: Annual Census of Forestry*. Catalogue No. 25-201.

U.S. Department of Commerce, Bureau of the Census. 1975. *Median Gross Rent by Counties of the United States, 1970*. Prepared by the Geography Division in cooperation with the Housing Division, Bureau of the Census. Washington, DC.

4. NEWSPAPERS:

Sicular, Terry, and Kathleen Hartford. 1989. "China's Looming Rural Crisis." *Asian Wall Street Weekly*. July 3.

5. CHAPTERS IN EDITED BOOKS OR CONFERENCE VOLUMES:

Fafchamps, Marcel. 2001. "The Role of Business Network in Market Development in Sub-Saharan Africa." In *Communities and Markets in Economic Development*, edited by Masahiko Aoki and Yujiro Hayami, 186-214. New York: Oxford University Press.

6. ONLINE BOOKS:

Mäler, Karl-Göran, and Jeffrey R. Vincent, eds. 2005. *Handbook of Environmental Economics, Vol. 3: Economywide and International Environmental Issues*. Amsterdam: Elsevier. <http://www.sciencedirect.com/science/handbooks/15740099> (July 23, 2007).

7. ONLINE JOURNAL ARTICLES: *please use DOI (digital object identifier) or URL*

Caucutt, Elizabeth M., and Krishna B. Kumar. 2008. "Africa: Is Aid an Answer?" *The B.E. Journal of Macroeconomics* 8(1): 1935-1690. doi: 10.2202/1935-1690.1761

Ruffle, Bradley J., and Richard Sosis. 2007. Does it Pay to Pray? Costly Ritual and Cooperation. *B.E. Journal of Economic Analysis and Policy* 7(1): Article 12. <http://www.bepress.com/bejeap/vol7/iss1/art18> (Aug. 7, 2007).

8. INTERNET SITES:

McDonald's Corporation. "Our History." Accessed July 19, 2016. <https://www.mcdonalds.com/us/en-us/about-us/our-history.html>

Writing an Economics Essay: Starting Points

To start a written assignment, review your professor's instructions and published work written by Economists. Examples are in the course outline, journals, working papers series, etc.

Two sources that provide information on writing for economics are:

McCloskey, Dierdre N. 2000. *Economical Writing, 2nd edition*. Prospect Heights, Illinois: Waveland Press.

Greenlaw, Steven A. 2006. *Doing Economics: A Guide to Understanding and Doing Economic Research*. New York: Houghton Mifflin Co.

Writing an Economics Essay: Resources

The **Resources Link** on Western University's Department of Economics website (<http://economics.uwo.ca/resources/index.html>) provides a list of sources for published and unpublished economic papers, articles, books, theses, government publications, data, etc.

DB Weldon Library has a collection of bibliographies, indexes, handbooks, and periodicals in economics. Library holdings, the online library catalogue, and other resources are available electronically from the Western Libraries Homepage <http://www.lib.uwo.ca/>. These can be accessed off-campus with the OffCampus Proxy Server on the Library main page.

Students are encouraged to take a library orientation tour to learn about where sources of information are located both physically and online. Consult library staff for questions

The New Palgrave Dictionary of Economics is the most comprehensive dictionary of economics in existence today. It is available online through the library catalogue, or in print in the Weldon's Reference section (call # HB 61.N49 2008 v. 1-8).

EconLit (Economic Literature) is an electronic bibliography of literature from 1969 to the present. It covers journals, collected articles, books, book reviews, dissertations, and working papers. It also provides citations, selected abstracts, and links to Western's full-text resources. Students can also print records by downloading marked records to a text file, sending marked records by email, or exporting them to a citation manager such as *Zotaro*. For a list of citation software, see <https://www.lib.uwo.ca/essayhelp/citationmanagementsoftware.html>.

CANSIM (Canadian Socio-economic Information Management System) is Statistics Canada's database of time series data covering a variety of economic aspects of Canadian society. Access the database by a Title Search on the Western Library's Catalogue, or from the Library's list of Databases under "Research Tools" on the Library's homepage.

Western Undergraduate Economics Review (WUER)

The Department of Economics encourages students to consider submitting their essays to the *Western Undergraduate Economics Review*, a journal published annually by the Department that showcases student work in economics. For further information, please visit http://economics.uwo.ca/undergraduate/undergraduate_economics_review.html

Essay Prize in Economics

The following criteria will be used:

1. Students can only win the Essay Prize in Economics once.
2. Two prizes may be awarded at the end of the academic term. One for a student registered in a 2100 level course and one for a student registered in a 2200 or higher level course. Each prize is valued at \$550.
3. Economics 4400E is not eligible for this prize as it has its own paper award.
4. Instructors will nominate students for the prize. The paper should be submitted to the Undergraduate Coordinator for consideration by the Essay Prize Committee, which will decide the winner.
5. The Essay Prize Committee will consist of the Undergraduate Program Director, WUER Faculty Advisor and one other faculty member. The decision of the Committee is final and cannot be appeal.
6. Papers will be judged on content, originality, use of references, spelling and grammar.

The grade given to the paper will not influence the decision of the Essay Prize Committee as all comments by the original marker will be removed.

The deadlines for submissions are:

Fall courses: January 1st

Winter courses: May 1st

The winner of the essay prize is encouraged to submit their paper to the Western Undergraduate Economics Review. Other appropriate papers may also be submitted.