

Industrial Organization
ECONOMICS EC3364G-001
Department of Economics
Western University

January 2023

General Information:

Instructor: Tai-Yeong Chung
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E-mail: tchung@uwo.ca (Please put “EC3364” in the subject line)
Office hours: Tuesday 1:00 pm – 3:00 pm
Sign up via email for online Zoom appointments
Delivery mode: In-person
Meeting time(s): Monday 3:30 pm – 4:30 pm and Wednesday 3:30 pm – 5:30 pm
Classroom: UCC 65
Course website: <https://owl.uwo.ca/portal>
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&S_electedCalendar=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)

Assessments and Grading:

1. Assignments (12%)

Two problem sets will be given. Each problem set is worth 6%.

Assignment due dates: 1) **Feb. 1** (by midnight)
 2) **Mar. 22** (by midnight)

Time used for due date is Eastern time.

Late assignments will not be accepted (zero point).

2. Main Essay Project (23%)

The essay project requires a student to identify an IO related topic/issue and apply economics to analyze it. It is important to correctly apply relevant economic concepts and tools to the topic.

The topic can be an analysis of a firm or industry. I suggest you analyze a specific issue in detail instead of a broad survey. A topic can also be based on a current event from news article (check Economist, Globe and Mail, Wall Street Journal, Financial Times, end so on.) Third option is to analyze a legal case on competition (check Competition Bureau and US Department of Justice).

- A detailed proposal (2 pages) is due on **March 16, 2023**. A detailed proposal is a proposal detailed enough so that a reader can understand which topic you plan to analyze and how. It typically has two parts. The first part is to identify an issue or news and provide some background information. The second part is to outline your analysis, and methodology. What economic concepts and tools do you plan to use?
- Final essay is due on **April 6, 2023**.

<Essay Grading>

Detailed proposal – 4 points (late penalty is one-point deduction per day)

Presentation – 4 points

Final Essay – 15 points (late penalty is four-point deduction per day)

The grade on this component will be based on both content and on quality of the student's writing (organization, grammar, and style).

3. Midterm Examination (30%) – Tentative date: Feb. 15, 3:30 p.m. – 5:00 p.m.

A midterm exam may be comprised of calculations, short answer, true/false, essay questions, or a combination thereof, on material covered up to and including the last class prior to the exam. The structure of the exam will be announced at OWL as the date approaches. All Department and University policies regarding missed exams and necessary documentation apply. Please see attached **Policy Regarding Makeup Tests and Final Examinations**.

4. Final Examination (35%)

The final examination will occur during the regular final exam period and will be scheduled by the registrar. This exam will assess students' ability to meet the learning outcomes of the course and will be based on all concepts learned during the course with more weight being assigned to material covered after the midterm examination. All Department and University policies regarding missed exams and necessary documentation apply. Please see attached **Policy Regarding Makeup Tests and Final Examinations**.

- Students are responsible for material covered in the lectures **as well as** the assigned material in the text. Exams will not be returned to students but may be reviewed in the instructor's office.
- Missed midterm exam without illness self-reports or approved, documented official accommodation will be given a mark of zero
- If there has been an illness self-report or approved, documented official accommodation, the weight of a missed midterm will be transferred to the final exam.

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 & University Policies for Winter 2023

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, policies, and your academic rights and responsibilities** are posted online in the current Western Academic Calendar at: <http://westerncalendar.uwo.ca>. Claiming that “you didn’t know what to do” is not an acceptable excuse for not following the stated policies and procedures.
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 being barred from future registration in other Economics courses or programs. The University may impose further penalties such as 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&SelectCalendar=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 to the instructor.
6. **Appeals:** University policies and procedures for appealing a mark can be found in the Student Academic Appeals section in the current Western Academic Calendar at: http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectCalendar=Live&ArchiveID=#Page_14. **Please note the relevant deadlines.**

Department of Economics procedures for appealing a mark can be found here: https://economics.uwo.ca/undergraduate/program_counselling/responsibilities_policies.html#appeals. 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 to submit an appeal to econugrd@uwo.ca. Please follow the instructions and use the appeal form shown in the above link.

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 **add** a second term half course: **Tuesday, January 17, 2023**
 - Deadline to **drop** a second term half course: **Tuesday, March 7, 2023**

Policy Regarding Makeup Tests and Final Examinations

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.

Policies Regarding Academic Accommodation

- Academic accommodation will not be granted automatically on request. Students must demonstrate by documentation that there are compelling medical or compassionate grounds before academic accommodation will be considered. The Faculty of Social Science's policies on academic accommodation are found at https://counselling.ssc.uwo.ca/procedures/academic_consideration.html
- **Accommodation for Students with Disabilities:** Students with disabilities or accessibility challenges should work with Accessible Education (formerly SSD, see http://academicsupport.uwo.ca/accessible_education/index.html), which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: [Academic Accommodation for Students with Disabilities](#).
- **Rewriting Exams and Retroactive Reweighting are NOT Permitted:** 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 also book travel arrangements AFTER final exam dates have been posted as they must not conflict with test or final exams.
- Unless medically incapable of doing so, students must notify their instructor prior to the test date or at least within **24 hours** when requesting a makeup exam. Failure to follow this procedure may result in denial of academic accommodation and a grade of zero. Students should also set up an appointment as soon as possible to meet with their instructor. If the instructor is not available, send an email message to the instructor, copying the Undergraduate Coordinator at econugrd@uwo.ca. **Notifying instructors of a missed exam does not automatically entitle students to a makeup.**

- For medical illnesses, students may consult Student Health Services and request a Student Medical Certificate from the physician. If assessed by an off-campus doctor, students must obtain a certificate from his/her office at the time of the visit/assessment. Student Medical Certificate (SMC) is available here:
https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf
- **Documentation for Accommodation:** Individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds or for other reasons.
- **Western University policy on Consideration for Student Absence** is available here:
https://counselling.ssc.uwo.ca/procedures/probation_rtw/appeals.html
- **Religious Accommodation:** Students should consult the University's list of recognized religious holidays and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the [Western Multicultural Calendar](#).

Policy Regarding Class Attendance and Engagement:

If the instructor deems a student's attendance or engagement in the class to be unsatisfactory, that student may be prohibited from writing the final examination. Examples of unsatisfactory class engagement include frequent absences from an in-person or synchronous online class, lack of assignment submissions, and inadequate use of online course materials. Instructors who intend to make use of this policy will notify the student in advance.

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.

Statement on Remote Proctoring:

While Western intends to hold most classes, mid-terms and finals in-person, the London-Middlesex Health unity may require western to teach in a remote format. If this occurs, all assessments will be done remotely and may involve the use of remote proctoring software (i.e., Proctorio, ProctorTrack). Instructors will provide information on the details should the need arise.

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 from someone else’s work 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 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.

Instructors may require students to submit written work electronically to <http://www.turnitin.com>.

¹ From 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

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

⁴ Adapted from the San José State University Plagiarism Tutorial <https://libguides.sjsu.edu/plagiarism>

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. You can find an online version on the Western Libraries website. Go to <https://www.lib.uwo.ca/essayhelp/index.html> and click on 'style guides'. For off-campus access, use the *OffCampus Access* sign-in on the Library's homepage.

Economics papers often use the in-text **author-date** style of citations and references. Details and examples of this style are shown 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 lowercase 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 should provide complete bibliographic information about each source cited. In addition, students should also provide adequate referencing of any data sources. This can be done in a data appendix following the text of the paper and before the References.

Examples of the format and content of references can be found here: <https://www.lib.uwo.ca/files/styleguides/ChicagoStyleAuthorDate.pdf>.

Writing an Economics Essay: Starting Points

To start a written assignment, review your professor's instructions. Read published work written by economists, which will give you examples of the structure and content of economics writing. Examples are readings in the course outline, journals, working papers, etc.

Two helpful sources that give information about how to write 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 link to a list of sources for published and unpublished economic papers, articles, books, theses, government publications, data, etc. Western Libraries has a very useful economics resource page <https://guides.lib.uwo.ca/economics>.

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 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 *Zotero*. 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

Two prizes may be awarded at the end of the academic year. One prize is for a student registered in a 2100-level course, and one is for a student registered in a 2200 or higher level course. Each prize is valued at \$500.

Students can only win the Essay Prize in Economics once. Economics 4400E is not eligible for this prize as it has its own essay award.

Instructors will nominate student essays for the prize. The essay should be submitted to the Undergraduate Coordinator for consideration by the Essay Prize Committee, which will decide the winner. 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 appealed.

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 instructor 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.