

# ECO310Y Industrial Org. & Public Policy 2011/12

## Prof. Murdock, Economics Department, University of Toronto

**Section L0101:** T 2:10-4:00, ES B142 (Fall), GE 106 (Winter); F 2:10-4:00, WI 1016

**Drop by office hours:** Tuesdays 4:10 - 5:40, GE 312

**Office hours by appointment:** Please make your request in class

**Telephone & e-mail:** 416-946-0656; See Section 5

**Head TA:** Dimitri Dimitropoulos

**Course Websites:** [chass.utoronto.ca/~murdockj/eco310/](http://chass.utoronto.ca/~murdockj/eco310/) & portal

## 1 Academic Integrity, Civility, Accessibility & Help

You are expected to consistently uphold your academic integrity. To check what this means see [http://www.utoronto.ca/academicintegrity/Academic\\_integrity.pdf](http://www.utoronto.ca/academicintegrity/Academic_integrity.pdf). Make sure your style of expression when speaking, writing, or acting is appropriate for an academic environment and shows respect for your classmates and instruction team. For any accessibility concerns, please visit <http://www.accessibility.utoronto.ca/>. If issues arise please seek help right away by contacting us and/or using U of T's academic support services listed at <http://life.utoronto.ca/get-smarter/academic-support.htm>. For issues that extend beyond our course please seek the help of your College Registrar.

## 2 Prerequisites

You need a good foundation in intermediate microeconomic theory and statistics (including multiple regression analysis) and to be able to use algebra and differential calculus. An administrator will remove you for missing prerequisites: ECO200Y1/ECO204Y1/ECO206Y1, ECO220Y1/ECO227Y1/(STA247H1, STA248H1)/(STA250H1, STA255H1)/(STA257H1, STA261H1). See: <http://www.economics.utoronto.ca/index.php/index/undergraduate/load/prerequisites>.

## 3 iClicker2

The iClicker is the most common classroom response systems on campus. U of T is now evaluating various systems and doing pilot tests. It may officially adopt the iClicker (or iClicker2) or something else in 2012/13. Our course is doing the iClicker2 pilot. While I have used the iClicker in other classes, the iClicker2 has more capabilities. You will receive an iClicker2 remote for use during the 2011/12 academic year for free. You can use it in any course using iClicker technology: it is backwards compatible. You will be asked to provide feedback to the evaluation team at U of T's CTSI office and I encourage you to provide thoughtful and candid information. This is an important decision for our university.

## 4 Learning Objectives

- (1) Explain key terms and concepts that are part of the field of Industrial Organization (e.g. Bertrand Paradox, credible threat, discrete choice model) and assess their applicability in particular situations
- (2) Work with models of industries (e.g. Cournot, Hotelling) and judge their relevance to specific real-world markets
- (3) Use game theory to derive market outcomes and firms' behaviors under novel conditions using the general analytical techniques we learn in this course
- (4) Use Excel to better understand theoretical models and to conduct merger simulations
- (5) Evaluate the competitive implications of a horizontal merger by gathering relevant information and applying appropriate economic theory
- (6) Identify appropriate data and empirical techniques (statistics/econometrics) to estimate the parameters of a model
- (7) Proficiently read and interpret estimation results (may be reported in tables or as STATA output)
- (8) Figure out when endogeneity will create serious problems for estimating parameters (e.g. of the demand curve), explain the implications and describe the remedies and their limitations
- (9) Critically read academic writing in the field of IO, identify the research questions/motivation and summarize the authors' approach and findings
- (10) Evaluate and critique analyses done by others without being dazzled by numbers, data, theory and jargon
- (11) Compose clear, concise, coherent and convincing written arguments
- (12) Find, incorporate, and cite respected academic, industry, and popular press sources that are relevant to your writing

## 5 Communication and Course Websites

I maintain the course website at [chass.utoronto.ca/~murdockj/eco310/](http://chass.utoronto.ca/~murdockj/eco310/) and the portal links to it. Important announcements may be made in lectures, on the websites, and/or via e-mail to the class. We obtain your U of T e-mail address from the portal. You should not expect a personal reply if you e-mail me with a request. *If you have a private concern or if you would like a personal reply then please speak to me in person during my posted "hours" given at the top of this syllabus.* In contrast, if there is a course issue that you think I should know about (e.g. error in posted solutions, broken link on the course website, etc.), please feel free to notify me via e-mail. In other words, you can use e-mail with me the same way I do with you: to let the other know about something but not as part of a back-and-forth discussion. For the latter, we need to talk.

## 6 Weekly Lectures and TA Tutorials

Lectures are given on Tuesdays and are most often PowerPoint presentations with participation opportunities (e.g. using an iClicker2). You may visit the course website, print out the lecture slides, and bring them to class. Black and white or gray scale print-outs are fine. You need to **take your own notes**: lecture slides are not lecture notes. TA Tutorials are led by our highly experienced Head TA Dimitri – he has *taught* this course before – and are held during the Friday time slot. For weeks with problem sets, Dimitri will take up selected problems or variants of them. TA tutorials also give you an opportunity to work with, review, and discuss concepts with Dimitri (and others in the class) and are a great time to ask questions related to any of the course materials.

## 7 Marking Scheme and Assessments

Assessment	% of Grade	Length	Dates & Time
Class participation, Fall term	5 %	–	Practice: first lecture Graded: Sept. 20 - Dec. 6
Term Test	25 %	2 hrs.	Friday, Nov. 11 2:00 - 4:00, location TBA
Class participation, Winter term	5 %	–	Graded: Jan. 10 - Apr. 3
Written analysis, Assignment #1	10 %	–	Assigned: Tuesday, Dec. 6 Due: 5:00 pm, Monday, Jan. 23
Written analysis, Assignment #2	20 %	–	Assigned: Tuesday, Jan. 24 Due: 5:00 pm, Monday, Feb. 27
Final Exam	35 %	3 hrs.	Apr. 11 - 30, TBA by A&S

For the Term Test you may not arrive late (without penalty) and you must stay for a minimum of 60 minutes. You may bring your own non-programmable calculator and you must bring your University of Toronto TCard. While the final examination is cumulative, I usually give a detailed one-page study guide to help you focus your study.

### 7.1 Class participation

Class participation reflects the quality of your participation during the Tuesday lecture times. This is a broad category. It includes iClicker2 participation but is not limited to that. In addition to completing readings you may be asked to prepare short writings ahead of class and/or do some brief in-class writing: these too will count towards participation.

### 7.1.1 iClicker2

Lectures include iClicker2 questions. These encourage you to prepare for class, to talk (about economics) with your classmates, and to identify misunderstandings. Just like more traditional class participation marks, quality matters. It is not enough to simply be physically present and pressing buttons. Hence, your iClicker2 responses will earn some points if your answer is incorrect but more points if correct. Each unanswered question earns 0 points. Point values can vary across questions.

To register go to <http://www.iclicker.com/support/registeryourclicker/>; type your name, **UTORid**, and iClicker2 remote id. It is *your responsibility* to: correctly register your iClicker2, bring it to class, bring any aids you need (calculator, textbook), arrive on time, and stay for the entire lecture. If you forget your iClicker2, I usually bring two loaners. These are available first-come, first-serve to students who never requested one before. See me (when it would not interrupt the lecture) to do the temporary registration.

### 7.1.2 Participate in class with integrity

You may only enter responses yourself using your own properly registered iClicker2 remote. Any work you turn in for class participation must be yours and cannot be copied – even in part – from anyone else. Your class participation is a single assessment worth 10 percent of your course grade. A student suspected of cheating on any question jeopardizes this entire mark and possibly much more. All cases will be reported to the Economics Department and to the Office of Student Academic Integrity. A student that “helps” someone else compromise their integrity can expect an equally harsh penalty. Protect your friends: do your own work.

## 7.2 Written analyses: Assignments #1 & #2

These assignments provide a great opportunity to enhance your economic research and analysis skills and to effectively convey your arguments and evidence through writing. Honing your skills in this type of writing – quite different from English composition – will help you regardless of your future career. Further, the skills required to write effectively as an economist are skills that everyone in our class can acquire. More immediately, these assignments will help you more deeply understand some important economic concepts and the types of arguments practicing economists make.

While different, both assignments ask you to apply economic reasoning to actual antitrust cases. They ask hard questions where there is genuine disagreement amongst economists and not one right answer. Instead you will be asked to support your positions with reputable evidence – carefully cited – and economic analysis. After considerable reading and thinking, you will need to put your research and analysis in writing. Then you can begin a substantial iterative revision process to turn your first draft into clear, coherent,

concise, and convincing prose that presents your original analysis with the goal of enabling the reader to follow your arguments. You will be graded on the quality of your written analysis and not on whether you reach the same final conclusion that I might.

The assignments ask you to present and support a position. For example, the merger of AT&T and T-Mobile will substantially lessen competition. Even economic experts who have won the Nobel Prize cannot simply offer their opinion without backing it up: more is expected of us. While you should not argue every side and leave your reader wondering where you stand, your writing should mention any important counter-arguments and evidence to present a balanced and intelligent analysis.

Both writing assignments will be fairly short. Detailed expectations will be given with the assignments. To give you a sense: for example the first assignment could be two double-spaced pages and the second five double-spaced pages. Part of the challenge will be to condense your analysis and facts down to the most essential. While it is easier for the writer to create a long meandering piece, readers value conciseness.

While you are ultimately responsible for your own writing and research and for knowing and following the University of Toronto's policies on academic integrity, some lecture time will be devoted to support you in the various skills needed to do these assignments well. Also, I encourage you to use U of T writing resources: <http://www.writing.utoronto.ca/>.

### **7.2.1 Write with integrity**

I expect everyone in our class to write with integrity. This includes properly incorporating and citing respected sources. As a first step towards ensuring that we share the same set of expectations, your required reading includes "How Not to Plagiarize."<sup>1</sup> I presume that you are completely trustworthy and working in good faith to meet all expectations. In the vast majority of cases this turns out to be an excellent presumption. However, retain all of your drafts, notes, and work for at least two months to help clear up any concerns that may arise. While we use Turnitin, it does basic checks only and cannot confirm that you meet our writing expectations.

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

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<sup>1</sup><http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>

## 7.2.2 Handing in Assignments #1 & #2 on time

Section 7 gives the due dates and times for Assignments #1 & #2. Deliver your work on time. Early assignments – even a week before the due date – are not only acceptable but encouraged. The due dates already include substantial extensions. *A late assignment will have 5% of the total possible points deducted for each day or part of a day it is late. Assignments that are more than 7 days late will not be accepted.*

## 7.3 Grading

For tests and examinations, to earn partial credit requires that part of your answer is clearly correct, directly relevant to the question asked, *and* not contradicted by other parts of your answer. Requests for remarking must: (1) Be made IN WRITING and given to me along with your entire assessment, (2) Explain which questions were improperly marked, (3) Be submitted within one month. The entire assessment will be remarked: your mark can go up, down, or remain unchanged. These conditions do not apply to clerical errors such as adding up your score wrong. If a clerical error occurs, please let me know as soon as possible.

### 7.3.1 Marks versus raw scores

Your mark on a piece of term work reflects any class-wide adjustments in the raw percentage scores. Some examples: adding three points to everyone's score or not counting an unduly difficult/confusing question. Any adjustments will be explained to the class. Your mark, not your raw score, best reflects the quality of your submitted work.

## 7.4 Missed Term Test

If you miss the Term Test and wish to request an opportunity to write the make-up test then you are responsible for accurately completing **all** of these steps.

**First Step:** Write a letter to Prof. Murdock meeting **all** of the following specifications.<sup>2</sup>

- (1) It explains why you missed the term work.
- (2) It lists the other courses are you taking and the names of your other professors. It identifies any term work you submitted in other courses on the same day or two days before or after the missed Term Test in our course.
- (3) The last sentence in the body of your letter is: "I understand that it is a punishable academic offense to present false information in support of my request for accommodation for missed term work."

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<sup>2</sup>The letter is the required documentation. I have found documents such as medical certificates unhelpful because medical professionals focus on serving their patients, not defending academic integrity at U of T.

- (4) It is word-processed and comfortably fits on one side of a standard 8.5 by 11 inch sheet. The writing is clear, concise, and appropriate for an academic setting. Everything except the last sentence is written in your own words.
- (5) The letter closes with your signature and your name, student number, e-mail address (U of T), and telephone number printed (word-processed) below it.

**Second Step:** Give a signed hardcopy of your letter **in-person** to Prof. Murdock or the Head TA **no later than one week** after the missed work.

**Third Step:** Check your e-mail. If your excuse is deemed unacceptable you will be notified via e-mail within one week of the receipt of your letter. No e-mail is good news. If you wish to contest a rejected excuse you must do in writing and give a signed hardcopy of your follow-up letter **in-person** to Prof. Murdock or a Head TA within two weeks of the original missed term work and you should write the scheduled make-up test just in case your excuse is accepted.

**Fourth Step:** Write a make-up test. A missed make-up automatically earns a mark of zero. The make-up is on Friday, Nov. 25, 2:00 - 4:00pm. The mark on the missed term test will reflect the make-up test result and, to a lesser extent, the quality of your letter.

## 8 Problem Sets, Required and Related Reading

Problem sets and solutions are posted on the course web site. These are ungraded and include original problems and exercises from popular undergraduate IO textbooks.

Readings fall into two categories: required and related. Everyone must work with the *required readings* extensively. There are eleven major required readings (marked by \*MRR\*) assignments: you will need to actively engage with these to prepare for graded work including class participation. *Related readings* means that you should use your discretion. The textbook referred to most often is *Industrial Organization: A Strategic Approach* by Jeffrey Church and Roger Ware (2000) available at [http://works.bepress.com/jeffrey\\_church/23/](http://works.bepress.com/jeffrey_church/23/). The last two pages of this syllabus give the major required reading assignments, course schedule and related readings.

A useful reference are your textbooks from your 200-level microeconomic theory course and your 200-level quantitative methods/statistics course. Supplementary (optional) industrial organization textbooks are *Modern Industrial Organization* by Dennis W. Carlton and Jeffrey M. Perloff (2005) and *Introduction to Industrial Organization* by Luis M. B. Cabral (2000). The supplementary (optional) econometrics textbooks are *Introduction to Econometrics, Third Edition* by James H. Stock and Mark W. Watson (2011). Copies are available at Robarts Library.

## 9 Major Required Reading Assignments

### \*MRR #1\*, start Sep. 13 & complete for Sep. 20

Elzinga, Kenneth G., and David E. Mills. 2011. "The Lerner Index of Monopoly Power: Origins and Uses." *American Economic Review*, 101(3): 558 - 64. [Hardcopies given](#)

### \*MRR #2\*, start Nov. 11 & complete for Nov. 15

Economist. "Matchmakers and trustbusters 'Two-sided' industries intrigue economists and incite regulators." December 8, 2005. <http://www.economist.com/node/5278464>

(**Recommended related reading:** Rysman, Mark. 2009. "The Economics of Two-Sided Markets." *Journal of Economic Perspectives*, 23(3): 125 - 143.

<http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.23.3.125>)

### \*MRR #3\*, start Nov. 11 & complete for Nov. 22

Lohr, Steve. "Can Microsoft Make You 'Bing'?" *The New York Times*, July 31, 2011.

<http://www.nytimes.com/2011/07/31/technology/>

[with-the-bing-search-engine-microsoft-plays-the-underdog.html](http://www.nytimes.com/2011/07/31/technology/with-the-bing-search-engine-microsoft-plays-the-underdog.html)

(**Recommended related reading:** Rochet, Jean-Charles, and Jean Tirole. 2003.

"Platform Competition in Two-Sided Markets" *Journal of the European Economic*

*Association*, 1(4): 990 - 1029. <http://www.jstor.org/stable/40005175>. Related reading restricted to pages 990 - 997 (stop at Section 2.2) and 1012 (start at Section 7) - 1020.)

### \*MRR #4\*, start Nov. 22 & complete for Nov. 29

Shy, Oz, and Zhu Wang. 2011. "Why Do Payment Card Networks Charge Proportional Fees?" *American Economic Review*, 101(4): 1575 - 90. [Hardcopies given](#)

### \*MRR #5\*, start anytime & complete for Dec. 6

All four topics under "Using Sources" on the "Writing at University of Toronto" website at <http://www.writing.utoronto.ca/advice/using-sources> including "How Not to Plagiarize," "Standard Documentation Formats" [please focus on APA, which is what we use], "Using Quotations," and "Paraphrase and Summary."

### \*MRR #6\*, start Dec. 6 & complete for Jan. 10

Klein, Benjamin, Andres V. Lerner, Kevin M. Murphy, and Lacey L. Plache. 2006.

"Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees." *Antitrust Law Journal*, 73: 571 - 626. <http://www.heinonline.org/HOL/Page?collection=journals&handle=hein.journals/antil73&id=581>

These case documents submitted to the Canadian Competition Tribunal:

Pleading #1. "Notice of Application pursuant to section 76 of the Competition Act - Price Maintenance." Dec. 15, 2010.

Pleading #10. "Response of Visa Canada Corporation." Jan. 31, 2011.

Pleading #11. "Response of MasterCard International Incorporated." Jan. 31, 2011.

Pleading #25. "Reply of the Commissioner of Competition." Feb. 14, 2011.

<http://www.ct-tc.gc.ca/CasesAffaires/CasesDetails-eng.asp?CaseID=333> (Make sure not to miss the concise statements of economic theory in the appendices.)



**\*MRR #7\*, start Jan. 10 & complete for Jan. 17**

U.S. Department of Justice and Federal Trade Commission. *Horizontal Merger Guidelines*. August 19, 2010. <http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf>.

**\*MRR #8\*, start Jan. 24 & complete for Feb. 7**

Pelcovits, Michael D. 2004. "Case 4: The Long-Distance Industry: One Merger Too Many? MCI WorldCom and Sprint (2000)." in *The Antitrust Revolution: Economics, Competition and Policy, Forth Edition* ed. by J.E. Kwoka Jr. and L.W. White. New York: Oxford University Press, pp. 101 – 127.

[http://www.oup.com/us/pdf/kwoka/9780195322972\\_04.pdf](http://www.oup.com/us/pdf/kwoka/9780195322972_04.pdf)

Gilbert, Richard J. and James Ratliff. 2009. "Case 4: Sky Wars: The Attempted Merger of EchoStar and DirecTV (2002)." in *The Antitrust Revolution: Economics, Competition and Policy, Fifth Edition* ed. by J.E. Kwoka Jr. and L.W. White. New York: Oxford University Press, pp. 115 – 139.

[http://elsa.berkeley.edu/users/gilbert/wp/Dish-DirecTV\\_merger.pdf](http://elsa.berkeley.edu/users/gilbert/wp/Dish-DirecTV_merger.pdf)

**\*MRR #9\*, start Jan. 24 & complete for Feb. 14**

Baker, Jonathan B. 2004. "Case 6: Efficiencies and High Concentration: Heinz Proposes to Acquire Beech-Nut (2001)." in *The Antitrust Revolution: Economics, Competition and Policy, Forth Edition* ed. by J.E. Kwoka Jr. and L.W. White. New York: Oxford University Press, pp. 150 - 169. [http://www.oup.com/us/pdf/kwoka/9780195322972\\_06.pdf](http://www.oup.com/us/pdf/kwoka/9780195322972_06.pdf)

Dalkir, Serdar and Frederick R. Warren-Boulton. 2004. "Case 2: Prices, Market Definition, and the Effects of Merger: Staples-Office Depot (1997)." in *The Antitrust Revolution: Economics, Competition and Policy, Fourth Edition* ed. by J.E. Kwoka Jr. and L.W. White. New York: Oxford University Press, pp. 52 – 72.

[http://www.oup.com/us/pdf/kwoka/9780195322972\\_02.pdf](http://www.oup.com/us/pdf/kwoka/9780195322972_02.pdf)

Thompson, Aileen. "Merger Analysis at the Federal Trade Commission: Two Recent Retail Cases." posted by the Bureau of Economics at the Federal Trade Commission under *Educational Materials*. <http://www.ftc.gov/be/thompsmerg.pdf>

**\*MRR #10\*, start Mar. 6 & complete for Mar. 13**

Hausman, Jerry A., and Gregory K. Leonard. (2002) "The Competitive Effects of a New Product Introduction: A Case Study." *Journal of Industrial Economics*, Vol. 50(3): 237 - 263. <http://www.jstor.org/stable/3569805>

**\*MRR #11\*, start Mar. 20 & complete for Apr. 3**

Oberholzer-Gee, Felix, and Koleman Strumpf. (2007) "The Effect of File Sharing on Record Sales: An Empirical Analysis." *Journal of Political Economy*, Vol. 115(11): 1 - 42.

<http://www.jstor.org/stable/10.1086/511995>

## 10 Course Schedule

Date(s)	Topics	Related Reading <sup>1</sup>
Sept. 13	Introduction; Micro Review: Demand	Chap. 1; your micro text
Sept. 20	Micro Review: Costs, Perfect Competition, Monopoly & Dominant Firm	Chap. 2; Sec. 3.1 *MRR #1*
Sept. 27 & Oct. 4	Single Period Games and Competition: NE, Bertrand & Cournot	Chap. 7; Sec. 8.1 - 8.4, 8.6 (not 8.2.3, 8.2.4 & 8.3.3)
Oct. 11	Two Period Games	Sec. 9.1 - 9.5.1, 13.1, 13.2
Oct. 18	Strategic Behavior with Threat of Entry	Sec. 13.3 - 13.5, 14.1
Oct. 25	Differentiated Goods: Hotelling	Sec. 11.4, 11.5, 11.7, 11.8
Nov. 1	Vertical Relations	Sec. 3.2; Chap. 22
Nov. 8	<i>Fall Break</i>	
Nov. 11	<b>Term Test</b>	
Nov. 15 & Nov. 22	Introduction to Two-Sided Markets with applications to payment systems	*MRR #2*
Nov. 29	Oz & Shy (2011)	*MRR #3*
Dec. 6	Antitrust Introduction, Economic Writing Workshop, <b>Assignment #1</b> presented	*MRR #4*
Jan. 10	Some class time: Visa/Mastercard; See next	*MRR #5*
Jan. 10, Jan. 17	Antitrust: Horizontal Mergers	Appendix A: 889-900; Chaps. 19 & 23; *MRR #6*
Jan. 23	<b>Assignment #1 due 5:00pm</b>	
Jan. 24	Horizontal Mergers cont'd & <b>Assignment #2</b> presented	
Jan. 31	Special Lecture at Computer Lab: Library Resources & Merger Simulation	
Feb. 7	Horizontal Mergers: Case Studies	*MRR #7*
Feb. 14	Horizontal Mergers: Case Studies	*MRR #8*
Feb. 21	<i>Reading Week</i>	
Feb. 27	<b>Assignment #2 due 5:00pm</b>	
Feb. 28 & Mar. 6	Estimating Demand: Homogeneous Goods	"Instrumental Variables Regression" <sup>3</sup>
Mar. 13, Mar. 20 & Mar. 27	Estimating Demand: Differentiated Goods Hausman & Leonard (2002)	*MRR #9*
Apr. 3	Oberholzer-Gee & Strumpf (2007)	*MRR #10*
		*MRR #11*

<sup>1</sup> Related readings refer to the textbook: Church and Ware 1st ed.

<sup>2</sup> This short handout, which I will provide, has questions you should ask when you are asked to write.

<sup>3</sup> This is Chapter 12 (pages 419 - 455) taken from *Introduction to Econometrics, Third Edition* by James H. Stock and Mark W. Watson.