# ECO 310Y INDUSTRIAL ORGANIZATION AND PUBLIC POLICY

# UNIVERSITY OF TORONTO DEPARTMENT OF ECONOMICS SUMMER 2012

Course Instructor: Dimitri Dimitropoulos E-Mail: d.dimitropoulos@utoronto.ca Office: 150 St. George St., Room No. 329 Web: http://dimitrid.webs.com

Lecture: Tuesday and Thursdays, 11:00am - 1:00pm. MP 137. Tutorials: Tuesday and Thursdays, 1:00 - 2:00pm. MP 137. Office Hours: Tuesday and Thursdays, 1:00 - 3:00pm

#### COURSE DESCRIPTION

Industrial Organization (IO) is the field of economics that is concerned with the structure of markets and the behavior of firms in these markets. This course will study the goals, strategies and decision making processes of large firms in imperfectly competitive markets, as well as the resulting economic outcomes. Particular emphasis is placed on the interdependence in the decisions of firms operating in a market. We will look at how real-world markets work, how firms compete or collude with each other, and how these interactions determine market structure, firms' performance, and social welfare. The role of Antitrust policy is discussed throughout the course. The first three-quarters of the course stress a basic understanding of IO theory, including extensions and modern developments. The last quarter of the course will provide an introduction to the field of New Empirical IO.

Prerequisites: ECO200Y1/ECO204Y1/ECO206Y1. ECO220Y1/ECO227Y1 or equivalents.

Note: It is the student's responsibility to ensure they have met the prerequisites for this course.

### **MEETINGS**

We will be meeting twice each week, with two hours of lectures scheduled for each meeting: Tuesdays and Thursdays from 11:00am - 1:00pm. Lectures will be held at MP 137. Lectures most often consists of lecture slide presentations with participation opportunities. You may visit the course website, print out the lecture slides, and bring them to class. Note: lecture slides are not a substitute for lecture notes.

Periodically, there will be a one-hour tutorial session following lecture, from 1:00 - 2:00pm, held in the same location as lecture. Tutorials are lead by the TA, and will be used to go over examples from lecture, and for test/exam review sessions. Tutorial material will be posted on the course website as we proceed.

#### **EVALUATION**

There are two main components to the graded course work: 3 term tests, and a final exam.

Each (non-cumulative) term test is worth 20% of the course grade. Tests are 90 minutes in duration, and will take place during regularly scheduled lecture-time, but not in the same room as lecture, on the following dates:

- Test #1: Thursday June 7. Location TBA.
- Test #2: Thursday June 28. Location TBA.
- Test #3: Thursday July 26. Location TBA.

The final exam is cumulative, and worth 40% of the course grade. The exam will be offered during the August examination period at the end of the summer, and will be scheduled by the Faculty of Arts & Science.

Note: If a student is ill for a term-test, the student must provide me with a copy of a University of Toronto Medical Certificate. Once the appropriate documentation is submitted, the student will have the weight of the missed test deferred to the final exam. Students will be granted accommodation for at most one missed term test. Students who miss two or more tests will receive a grade of zero, and will be advised to drop the course on medical grounds.

#### COURSE MATERIAL

The required textbooks for this course, which are both available freely on-line, are:

- Church, Jeffrey and Roger Ware (2000). *Industrial Organization: A Strategic Approach*. Irwin, McGraw-Hill. Available at: http://works.bepress.com/jeffrey\_church/23/
- Aguirregabiria, V. (2012). Empirical Industrial Organization: Models, Methods, and Applications. Manuscript. Available at: http://www.aguirregabiria.org/barcelona/book dynamic io.pdf

#### WEBSITE

The course web-site is accessible through http://dimitrid.webs.com/eco310.htm. I will use the course web-site as a means of communication with the class, so I recommend you check the announcements regularly. In addition, I will periodically post the lecture slides online. Some of the on-line material will be password protected; I will announce the course password during the first lecture.

#### **E – MAIL POLICY**

Use e-mails for appointments, administrative matters or urgent issues. Questions about the course, lectures and tutorial material, etc., are more appropriate for office hours. I will normally reply to e-mails within 24 hours. You must use your UofT e-mail address, and include the course number "ECO 310" in the subject line, otherwise your e-mail may be automatically quarantined as "junk e-mail".

#### ACADEMIC CONDUCT

It is the responsibility of the students to know and understand the provisions of the University of Toronto's Code of Behavior on Academic Matters. (http://www.governingcouncil.utoronto.ca/policies/behaveac.htm). All cases of suspected academic misconduct will be referred to the Dean's office.

## LECTURE SCHEDULE

The following is a tentative schedule of lecture topics, with applicable references listed below. Note: Course requirements are subject to change. In any case, I will inform students of changes during class time and on the course website. It is the responsibility of the student to be aware of any changes.

• Lecture 0. T-May-15	Introduction to the Course	Church & Ware Chp 1
• Lecture 1. T-May-15	Review of Demand	Character of Warren Character 2
• Lecture 2. R-May-17	Theory of the Firm	Church & Ware Chp 3
• Lecture 3. T-May-22	The Perfect Competition Benchmark	Church & Ware Chp 2
• Lecture 4. R-May-24	Monopoly: Basic Theory  Monopoly: Price Discrimination (I)	Church & Ware Chp 2 & 4
• Lecture 5. T-May-29	Monopoly: Price Discrimination (I)  Monopoly: Price Discrimination (II)	Church & Ware Chp 5
<ul><li>Lecture 6. R-May-31</li><li>Lecture 7. T-Jun-5</li></ul>	Monopoly: Price Discrimination (II) Monopoly: Product Selection	Church & Ware Chp 5 Hand-Out
	1 0	
• Thursday June 7	Term Test #1 - Covers Lectures 1 to 6	Location TBA
• Lecture 8. R-Jun-7	Monopoly: Advertising (following TT1)	Hand-Out
• Lecture 9. T-Jun-12	Game Theory (I)	Church & Ware Chp 7
• Lecture 10. R-Jun-14	Oligopoly: Cournot Quantity Competition	Church & Ware Chp 8
• Lecture 11. T-Jun-19	Oligopoly: Bertrand Price Competition	Church & Ware Chp 8
• Lecture 12. R-Jun-21	Oligopoly: Competition with Differentiated Products	Church & Ware Chp 11
• No Lecture: T-Jun-26	June Exam Period	
• Thursday June 28	Term Test $\#2$ - Covers Lectures 7 to 12	Location TBA
<ul><li>Thursday June 28</li><li>Lecture 13. T-Jul-3</li></ul>	Term Test #2 - Covers Lectures 7 to 12 Game Theory (II)	Location TBA Church & Ware Chp 9
	**	
• Lecture 13. T-Jul-3	Game Theory (II)	Church & Ware Chp 9
<ul><li>Lecture 13. T-Jul-3</li><li>Lecture 14. R-Jul-5</li></ul>	Game Theory (II) Dynamic Oligopoly: Collusion	Church & Ware Chp 9 Church & Ware Chp 10
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> <li>Lecture 17. T-Jul-17</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence Dynamic Oligopoly: Strategic Investment	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14 Church & Ware Chp 14 & 15
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> <li>Lecture 17. T-Jul-17</li> <li>Lecture 18. R-Jul-19</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence Dynamic Oligopoly: Strategic Investment Vertical Contractual Relations	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14 Church & Ware Chp 14 & 15 Church & Ware Chp 22
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> <li>Lecture 17. T-Jul-17</li> <li>Lecture 18. R-Jul-19</li> <li>Lecture 19. T-Jul-24</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence Dynamic Oligopoly: Strategic Investment Vertical Contractual Relations Structure-Conduct-Performance	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14 Church & Ware Chp 14 & 15 Church & Ware Chp 22 Church & Ware Chp 12
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> <li>Lecture 17. T-Jul-17</li> <li>Lecture 18. R-Jul-19</li> <li>Lecture 19. T-Jul-24</li> <li>Thursday July 26</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence Dynamic Oligopoly: Strategic Investment Vertical Contractual Relations Structure-Conduct-Performance Term Test #3 - Covers Lectures 13 to 18	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14 Church & Ware Chp 14 & 15 Church & Ware Chp 22 Church & Ware Chp 12 Location TBA
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> <li>Lecture 17. T-Jul-17</li> <li>Lecture 18. R-Jul-19</li> <li>Lecture 19. T-Jul-24</li> <li>Thursday July 26</li> <li>Lecture 20. R-Jul-26</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence Dynamic Oligopoly: Strategic Investment Vertical Contractual Relations Structure-Conduct-Performance Term Test #3 - Covers Lectures 13 to 18 Intro to New Empirical IO (following TT3)	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14 Church & Ware Chp 14 & 15 Church & Ware Chp 22 Church & Ware Chp 12 Location TBA Hand-Out
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> <li>Lecture 17. T-Jul-17</li> <li>Lecture 18. R-Jul-19</li> <li>Lecture 19. T-Jul-24</li> <li>Thursday July 26</li> <li>Lecture 20. R-Jul-26</li> <li>Lecture 21. T-Jul-31</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence Dynamic Oligopoly: Strategic Investment Vertical Contractual Relations Structure-Conduct-Performance Term Test #3 - Covers Lectures 13 to 18 Intro to New Empirical IO (following TT3) Estimating Demand, Supply and Market Power (I)	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14 Church & Ware Chp 14 & 15 Church & Ware Chp 22 Church & Ware Chp 12 Location TBA Hand-Out
<ul> <li>Lecture 13. T-Jul-3</li> <li>Lecture 14. R-Jul-5</li> <li>Lecture 15. T-Jul-10</li> <li>Lecture 16. R-Jul-12</li> <li>Lecture 17. T-Jul-17</li> <li>Lecture 18. R-Jul-19</li> <li>Lecture 19. T-Jul-24</li> <li>Thursday July 26</li> <li>Lecture 20. R-Jul-26</li> <li>Lecture 21. T-Jul-31</li> <li>Lecture 22. R-Aug-2</li> </ul>	Game Theory (II) Dynamic Oligopoly: Collusion Dynamic Oligopoly: Stackleberg Competition Dynamic Oligopoly: Entry Deterrence Dynamic Oligopoly: Strategic Investment Vertical Contractual Relations Structure-Conduct-Performance Term Test #3 - Covers Lectures 13 to 18 Intro to New Empirical IO (following TT3) Estimating Demand, Supply and Market Power (I) Estimating Demand, Supply and Market Power (II)	Church & Ware Chp 9 Church & Ware Chp 10 Church & Ware Chp 13 Church & Ware Chp 13 & 14 Church & Ware Chp 14 & 15 Church & Ware Chp 22 Church & Ware Chp 12 Location TBA Hand-Out Church & Ware Chp 12

# TUTORIAL SCHEDULE

The following is a tentative schedule of tutorial dates. Tutorial materials will be posted on the course website as we proceed through the term, usually one week before each tutorials.

<ul><li> Tutorial 1. R-May-31</li><li> Tutorial 2. T-Jun-5</li></ul>	Review for Term Test 1 Review for Term Test 1
<ul><li> Tutorial 3. R-Jun-21</li><li> Tutorial 4. T-Jun-26</li></ul>	Review for Term Test 2 Review for Term Test 2
<ul><li>Tutorial 5. T-Jul-19</li><li>Tutorial 6. T-Jul-24</li></ul>	Review for Term Test 3 Review for Term Test 3
<ul><li> Tutorial 7. T-Aug-7</li><li> Tutorial 8. R-Aug-9</li></ul>	Review for Final Exam Review for Final Exam