# ECO200: Section L0101: 2014–15 Microeconomic Theory

1 The Big Picture

**Lectures.** Wednesdays: 10:00 AM – 12:00 PM; AH 100.

**Tutorials.** Fridays: 12:00 PM - 1:00 PM; AH 100.

## Contacting me.

office: Max Gluskin House (150 St. George Street), Room 330 office hours: Mondays, 2:30 PM – 3:30 PM

Thursdays, 11:00 AM - 12:00 PM (by appt. https://calendly.com/rgazzale/)

email: robert.gazzale@utoronto.ca

#### Texts and Materials.

• Required: Goolsbee, Levitt and Syverson, *Microeconomics*, First Edition, 2013 (including Calculus Complement).

• Required: iClicker.

• Required: Handouts as posted on the Portal.

Website. UofT's Learning Portal (Blackboard): https://portal.utoronto.ca

#### Assessments.

| ·                    |                                     |         |        |
|----------------------|-------------------------------------|---------|--------|
|                      | Date & Time                         | Length  | Weight |
| iClicker             | All Year                            | N/A     | 7%     |
| Pre-lecture quizzes  | All Year                            | N/A     | 7%     |
| Writing Assignment 1 | Thursday, November 27, 2014; 11 PM  | N/A     | 4%     |
| Writing Assignment 2 | Thursday, March 26, 2015; 11 PM     | N/A     | 6%     |
| Term Test 1          | Friday, October 31, 2014; 4 – 6 PM  | 2 hours | 12%    |
| Term Test 2          | December exam period                | 2 hours | 12%    |
| Term Test 3          | Friday, February 13, 2015; $4-6$ PM | 2 hours | 12%    |
| Final Examination    | April exam period                   | 3 hours | 40%    |

# 2 The Details 2.1 Goals of the Course

I have three goals for this course.

1. Building on the microeconomic foundations learned in Introduction to Economics, developing canonical models of microeconomics to analyze the decisions of consumers, the behaviour of firms, and the functioning of markets.

These models form the core of neoclassical economic theory, and are the basis for economic analyses of market equilibrium, efficiency, and individual and social welfare. Thus understanding them is necessary for more advanced work in economics.

- 2. Assist in your further development in "thinking like an economist." Throughout the semester, we will build on three important concepts in economics: (1) optimization; (2) equilibrium; and (3) efficiency (or, more broadly, the desirability (or not) of equilibrium outcomes).
- 3. Gain sufficient proficiency with these models to analyze a variety of issues of current economic and policy interest.

# 2.2 Academic Integrity

Academic integrity is one of the cornerstones of the University of Toronto. It is critically important both to maintain our community which honours the values of honesty, trust, respect, fairness and responsibility and to protect you, the students within this community, and the value of your degree. According to Section B of the University of Toronto's Code of Behaviour on Academic Matters (http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjun011995.pdf), which all students are expected to know and respect, it is an offence for students:

- To obtain unauthorized assistance on any assignment.
- To provide unauthorized assistance to another student. This includes showing another student completed work (e.g., an answer in a test).
- To obtain under false pretence or falsify any documentation required by the University. This, includes, but is not limited to, the *Verification of Student Illness or Injury* form.
- To alter and submit for re-marking any course assignment (e.g., a test).
- To use **or possess** an unauthorized aid in any test or exam (e.g., cellphone, graphing or programmable calculator).
- To continue writing when the time is up in any test or exam.
  - **N.B.** Anyone writing when the invigilator announces the end of the test or exam period automatically loses 5% of the total marks available on the test or exam.

There are other offences covered under the Code, but these are by far the most common. Please respect these rules and the values which they protect.

I recommend purchasing the indicated version of the required text.

# 2.4 The Writing Assignments

The models we develop in ECO200 can be rather abstract. We<sup>1</sup> have two goals with the writing assignments. First, we seek to help you sharpen your skills in applying these models to the real world. Additionally, we hope to sharpen your skills in developing and presenting (economically grounded) analyses and arguments.

Towards these ends, in all ECO200 sections there will be two required writing assignments worth a combined 10% of your course grade. Further details will be posted on the Portal.

<sup>&</sup>lt;sup>1</sup>I am not a fan of "the majestic plural": the use of "we" when the writer really means "I". In this case, "we" refers to the faculty of the department of Economics, which is committed to requiring economics majors to take courses with a significant writing component.

## 2.4.1 Plagiarism

Plagiarism is a potentially serious problem in writing assignments. There will be more details concerning the definition of plagiarism, advice on how to avoid it, and the associated penalties when we discuss the assignment in more detail. The term paper must be submitted for review through http://turnitin.com/. Instructions will be provided along with the details to the assignment. It is important to underscore that the Department of Economics prosecutes all cases of plagiarism vigorously. This includes unintentional plagiarism. Ignorance of the rules of plagiarism is specifically excluded as a defence. This is the University's disclaimer concerning Turnitin.com:

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.

#### 2.4.2 Extensions

Nope. No extensions will be granted due to illness, computer problems, or any other excuse, as ample time has been provided to complete the project.

## 2.5 Pre-Lecture Quizzes

My goal is for Wednesday "lectures" is to tilt time away from lecturing towards problem solving. In order to accomplish this, you need to come to class prepared. Without good incentives to do so, I know that even the most well-meaning student, reading the textbook before class will begin to slide once overall academic demands start to increase.

The Pre-Lecture Quizzes are my way of providing incentives to come to class having already completed the textbook reading at a level of general comprehension. After the first week, there are 14 lectures for which significant textbook reading is expected (see Table 1). By 9:45 AM on each of these days, short quiz (approximately 12 questions) needs to be completed on the Portal.<sup>2</sup> Consistent with the goals of the quizzes, questions not be difficult (as defined by me and the textbook authors). In calculating your marks, I will drop your lowest score.

#### 2.6 iClicker

We shall spend as much in-class time as possible solving problems. These problems will generally count for marks, and you will submit your responses with an iClicker. The iClicker is thus required: new and used ones are widely available (e.g., UofT Bookstore, amazon.ca). As the bookstore buys back clickers (and rents used clickers), the cost of acquiring your own clicker for the year is about \$18.00. If you do not wish to purchase an iClicker, you share an iClicker with a student **not** enrolled in this section of ECO200.

# 2.6.1 iClicker Registration & Troubleshooting

To register go to http://www1.iclicker.com/register-your-remote/register-clicker/. You MUST use your UTORid - NOT your student # - as your "Student ID" and register by Lecture 3. If you correctly register your iClicker by Lecture 3 AND attend Lecture 3 then a BONUS of 3 percentage points will be added to your iClicker mark.

Nearly all iClicker malfunctions — including when the remote seems "dead" — are easily resolved: call the technical support toll free at 866-209-5698 or e-mail support@iclicker.com.

<sup>&</sup>lt;sup>2</sup>It will be available starting the week before. You may complete it at any time before the due date.

# 2.6.2 When does my iClicker participation count for marks?

In short, your iClicker participation may count for marks in all 23 of the lectures after the first lecture (called EVERY, with your lowest 3 weeks being dropped) or it may count for 13 of the remaining lectures (called either ODD or EVEN, with your two lowest weeks being dropped). Whether you are in the first or second category depends both on your choice and chance.

Our course was selected for U of T approved research. Because I believe the study is worthwhile and a potential learning experience for our class, I agreed to participate. However, the researcher is Lei Tang (lei.tang@mail.utoronto.ca), not me.

You will choose among four DRAWS (A, B, C, and D), which differ in the probability that you are assigned an iClicker marking scheme where nearly every lecture counts for marks – EVERY – or one where fewer lectures count for marks – ODD or EVEN. **Table 1 clearly indicates which weeks are ODD and which weeks are EVEN.** Further, weekly portal announcements will serve as reminders.

Preference for weekly iClicker marking

Preference for less frequent iClicker marking

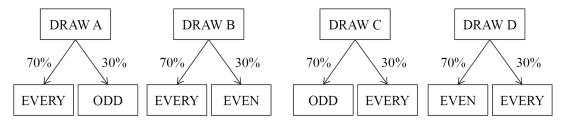


Figure 1: You choose Draw A, Draw B, Draw C or Draw D. Then you are randomly assigned an iClicker marking scheme with the probabilities given in the figure.

During Lecture 3 you will pick DRAW A, B, C, or D via your iClicker.<sup>3</sup> Choose carefully as the decision is final. Also, you will decide whether your data may be used in the study and receive a survey. Lei Tang will keep your data confidential. I will only know your assigned marking scheme and *not* which DRAW you picked, whether you consented, or your survey replies.

No later than Friday, September 26, "MyGrades" in portal will contain your assigned iClicker marking scheme; I will also e-mail it to you. No switching is possible. Regardless of your assigned marking scheme, I encourage you to attend all classes and use your iClicker remote during every class you attend.

#### 2.6.3 Roles of Prof. Gazzale and Lei Tang

If you have a concern about this course—including the iClicker—this almost always should be directed to me (Prof. Gazzale). The only exception is that you need to make your choice of DRAW A, B, C or D known to Lei Tang (and *not* me), inform her of you consent decision, and respond to her survey, which should all be completed in Lecture 3. Direct any specific concerns about the iClicker *research* to Lei Tang(lei.tang@mail.utoronto.ca). Any other questions, including ones about iClicker marking, should be directed to me.

<sup>&</sup>lt;sup>3</sup>If you miss Lecture 3 or come without a correctly registered iClicker, Lei Tang will e-mail you shortly after. You will have 24 hours to respond and a chance to redeem half the lost bonus for Lecture 3. Otherwise you will be randomly assigned the EVERY, ODD or EVEN marking scheme with a 50%, 25% and 25% chance respectively.

## 2.6.4 Scoring iClicker participation when it count for marks

Just like more traditional class participation marks, quality matters. iClicker responses earn some marks if incorrect, but more marks if correct. Each unanswered question earns 0 marks, and each response earns 2 marks. While the number of additional marks for a correct response can vary across questions, the default is 3 additional marks for a correct answer.<sup>4</sup> If the green vote status light illuminates when you submit a response then it has been successfully recorded; a red light indicates a problem.

#### 2.6.5 Academic Integrity and iClicker Participation

Unless explicitly announced, you may discuss iClicker questions with your peers before submitting a response. You may only enter responses yourself using your own properly registered iClicker. Cheating on any question jeopardizes the iClicker mark. All cases will be reported to the Economics Department and to the Office of Student Academic Integrity. A student that "helps" by operating someone else's remote can expect an equally harsh penalty.

#### 2.7 Tests and the Final Examination

Term Tests will be comprised multiple choice questions, short-answer questions, and problems to be solved. The skills developed and refined in the writing assignments will be particularly beneficial for the short-answer questions.

Your mark on a test or exam (i.e., what is reported on the Portal) reflects any adjustments to the raw scores such as adding points to everyone's score or not counting an unduly difficult/confusing question. Your mark, not your raw score, best reflects the quality of your submitted work.

One half of the Final Examination marks will be based on multiple choice questions common to both ECO200 sections. The other half of the marks will come from Gazzale-specific questions, and will be some combination of multiple choice, short answer, or problem solving.

#### 2.7.1 What's on the test?

While the final examination is cumulative, term tests are not. (Caveat: Economics is cumulative, so in covering current material, there will most surely be questions that use concepts, definitions, etc. from previous tests.)

If a concept, skill, or topic is addressed in lectures, required readings, or tutorials, it is testable. **N.B.** My choosing to devote scarce lecture time to a topic or concept is a good indication I find it important. Things I find important have a nasty habit of appearing on tests and exams. While this set of facts **in no way** rules out the inclusion of material not covered in lectures, it may be helpful in prioritizing your preparation.

#### 2.7.2 Marking and Appeals

If **after** reviewing the test solutions you believe your exam was incorrectly graded, you must go to TA office hours to discuss the issue with a TA. If at this point you would like your exam regraded, the TA will bring your exam to the Instructor without indicating the answer you are disputing. The entire test will be regraded, which may result in either an increase or decrease of your grade.

Note that if we made an error adding your marks, please bring it to the attention of a TA, either in office hours or your tutorial. (We will not regrade your entire exam in this case.)

<sup>&</sup>lt;sup>4</sup>This means that 2 mark will be earned for a response to a question in which there is no objectively correct answer.

#### 2.7.3 Medical Certificates

If you are unable to write any of the tests for medical reasons, you must submit official documentation within one week of the missed test.<sup>5</sup> The details:

- I only accept the official University of Toronto's Verification of Student Illness or Injury, fully completed by a Physician, Surgeon, Nurse Practitioner, Registered Psychologist or Dentist.
- The **original** certificate must be submitted to me, Prof. Gazzale, in person (i.e., not to the Department receptionist and not by fax or e-mail).
- The practitioner must have assessed you no later than the day of the missed test.
- The practitioner must initial either Serious or Severe.
- Suspicious certificates will be forwarded to the Office of Student Academic Integrity (OSAI) for further evaluation.

#### 2.7.4 Evaluations: Make-Up Test

Students missing a term test for an approved, certified medical reason (see above), or other approved cause, will be permitted to write a comprehensive (i.e., cumulative) make-up test towards the end of the term. Students who do not qualify for writing the make-up test will receive a grade of zero for the missed test. This make-up test may only replace **one** missed term test.

**N.B.** Students who miss the final exam must petition the Faculty of Arts and Science for permission to write a deferred examination in the summer.

Make-up details: Friday, March 27, 2015, from 9:00 AM to 11:00 AM in UC 266.

#### 2.8 Website

This course will make heavy use of the UofT's Learning Portal (a.k.a. Blackboard). You are responsible for checking it regularly. Content includes:

- Announcements;
- Pre-lecture quizzes;
- Copies of the lecture slides;
- Tutorial Problem Sets:
- Additional problems, some with solutions; and
- Previous tests and exams.

#### 2.9 Lectures

During lecture, I will project "PowerPoint" slides. I encourage you to print them and bring them to lecture. You will notice that while a set of slides represents a good overview of a topic and contains many of the important definitions, many of the details are missing. During the lecture, we shall fill in the missing details, resulting in "marked-up" slides. I will not make available the marked-up slides. I have chosen this route of lecture-note delivery for two reasons.

- 1. The process of marking-up the slides slows me down. Trust me, this is a good thing.
- 2. I like to think that lecture attendance has benefits. Not providing the marked-up lecture notes is my little nudge towards increased attendance.

 $<sup>^{5}</sup>$ If you miss a term test taking place in the December exam period, you must submit the documentation during the first week of classes in January.

#### 2.10 Tutorials

Tutorials, each led by a course Teaching Assistant (TA) will be offered (almost) weekly. The schedule will be posted on the Portal. The primary goal of these sessions is to gain practice and expertise in setting up and solving problems similar to those on tests and exams. In some sessions, the TA will review difficult material, and in most sessions there will be time for student questions. Tutorial Problem Sets will be posted beforehand.<sup>6</sup> Tutorial assignments will not be graded, but are designed to improve the student understanding of the core material and to prepare students for the term tests and final examination.

## 2.11 Getting Help

Office Hours My office hours are listed on page 1. The Monday slot is drop-in: just show up. The Thursday slot is by appointment only. To make a 15-minute appointment, visit https://calendly.com/rgazzale/ at least 10 hours before the requested appointment.

**TA Office Hours** Each week, course TAs will hold drop-in office hours. Hours and locations will be posted early in the semester.

TA Sessions Always a good bet.

The Economics Study Centre Located in Gluskin 110 (150 St. George Street), the Economics Study Centre is staffed by third and fourth-year undergraduate students (peer mentors) who assist students on a one-to-one basis or in study groups. Starting in the beginning of October, mentors are available Mondays through Thursdays, 1:00PM-5:00PM.<sup>7</sup> See http://www.economics.utoronto.ca/index.php/index/undergraduate/load/studyCentre for further details.

Study Groups Many find it beneficial to work on problems in small groups.

#### 2.12 Communication

The TAs and I will make important announcements in lectures and tutorials, on the Portal, or via e-mail to the class. We obtain your UofT e-mail address from the Portal.

Unfortunately, given the size of this course, 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 office hours. 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.

#### 2.13 Doing Well in ECO200

A student faces a classic economic problem. She takes a bunch of inputs (time and effort spent reading, solving problems, going to class, etc.) to produce an output: knowledge and understanding, which is hopefully highly correlated with her grade.<sup>8</sup> Her main resource, time, is rather constrained. Each individual student will solve this time allocation problem differently: some will be less willing to give up leisure time (or time devoted to other courses or a job) to devote it to this course; some

<sup>&</sup>lt;sup>6</sup>Written solutions to Tutorial Problem Sets will not be provided.

<sup>&</sup>lt;sup>7</sup>Additional "micro only" hours will be held weekly at a time to be determined.

<sup>&</sup>lt;sup>8</sup>There is, of course, a random component. Don't you just hate when the topic you know really well is underrepresented on an exam?

may need to read multiple times to match the comprehension another gains in one reading. That being said, I offer three pieces of advice.

- **Prepare for lectures.** I have two things in mind. First, PDFs of the slides I project during lecture will be available on the Portal. Many find it helpful to print the PDFs before class and take notes on the printout. Second, do the textbook reading, at least at a level of general comprehension, *before* class. I am going to expect that you have done so.
- Do problems. The most important skill in this class is the ability to take the concepts we develop in class and apply them to novel situations and environments. Solving problems is the best way I know to develop this skill. (Solving problems also serves a valuable self-assessment role.) In addition to Tutorial Problem Sets and end-of-chapter problems in the texts, I will post problems on the Portal.
- Seek assistance. Wisely. Economics is cumulative and ECO200 is fast paced. Resolving confusion quickly, perhaps with assistance from the sources above, is key to keeping up. That being said, do not underestimate the benefits of struggle. There is tremendous value to taking incorrect paths, and understanding why they do not work, before arriving at a fruitful approach. Finding the balance between struggle and assistance is tricky but worthwhile.

#### 3 Tentative Schedule

Our tentative schedule is below. Adjustments are not unlikely. Any modifications to the schedule will be widely announced.

|                 |                   | clicker              | clicker |                      |                          | Pre-Lecture     |
|-----------------|-------------------|----------------------|---------|----------------------|--------------------------|-----------------|
| $\mathbf{Week}$ | Date              | $\operatorname{odd}$ | even    | Topic                | Reading                  | $\mathbf{Quiz}$ |
| 1               | 10-Sep-14         |                      |         | Introduction         | Ch 1 & 2                 |                 |
| 2               | $17	ext{-Sep-}14$ | ✓                    | ✓       | Surplus              | Ch 3                     | 1               |
| 3               | 24 -Sep-14        | ✓                    | ✓       | Consumer Behaviour   | Ch 4                     | 2               |
| 4               | 1-Oct-14          |                      | ✓       |                      |                          |                 |
| 5               | 8-Oct-14          | ✓                    |         | Theory of Demand     | Ch 5                     | 3               |
| 6               | 15-Oct-14         |                      | ✓       |                      |                          |                 |
| 7               | 22-Oct-14         | ✓                    |         | Producer Behaviour   | Ch 6                     | 4               |
| 8               | 29-Oct-14         |                      | ✓       |                      |                          |                 |
| 9               | 5-Nov-14          | ✓                    |         | Costs                | Ch 7                     | 5               |
| 10              | 12-Nov-14         |                      | ✓       | Supply               | Ch 8                     | 6               |
| 11              | 19-Nov-14         | ✓                    |         |                      |                          |                 |
| 12              | 26-Nov-14         |                      | ✓       | Monopoly             | Ch 9                     | 7               |
| 13              | 7-Jan- $15$       | ✓                    |         | Price Discrimination | Ch 10                    | 8               |
| 14              | 14-Jan-15         |                      | ✓       |                      |                          |                 |
| 15              | 21-Jan- $15$      | ✓                    |         | Game Theory          | Ch 12                    | 9               |
| 16              | 28-Jan- $15$      |                      | ✓       |                      |                          |                 |
| 17              | 4-Feb- $15$       | ✓                    |         | Oligopoly            | Ch 11                    | 10              |
| 18              | 11-Feb- $15$      |                      | ✓       |                      |                          |                 |
|                 | 18-Feb- $15$      |                      |         |                      |                          |                 |
| 19              | 25-Feb- $15$      | ✓                    |         | Uncertainty          | $Ch 13.5\dagger$         | 11              |
| 20              | 4-Mar-15          |                      | ✓       | Adverse Selection    | Ch 15.1 & 15.4 $\dagger$ | 12              |
| 21              | 11-Mar-15         | ✓                    |         |                      |                          |                 |
| 22              | 18-Mar-15         |                      | ✓       | Moral Hazard         | Ch 15.2 & 15.3 $\dagger$ | 13              |
| 23              | 25-Mar- $15$      | ✓                    |         | Externalities & PGs  | Ch 16                    | 14              |
| 24              | 1-Apr-15          | ✓                    | ✓       |                      |                          |                 |

Table 1: iClicker schedule is firm. Schedule of topics and pre-lecture quizzes is tentative.  $\dagger$  indicates required handout will be posted on Portal.