

ECO100: Introductory Economics

Introduction to the Economic Way of Thinking

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The syllabus

a.k.a. the course outline

- If it is in the syllabus, you are responsible for it

textbooks & MobLab

textbooks

Krugman, Wells, Au & Parkinson; *Microeconomics* and *Macroeconomics* (both Second Canadian Edition)

- Special price at UofT bookstore—includes **MobLab** access
- First Canadian Edition, US edition, other economics textbooks: may be acceptable substitutes for textbook, although probably do not include MobLab access.

online component

MobLab is **required**

- **MobLab** access is **included** with UofT-bookstore purchased textbooks
- Alternatively, purchase **MobLab** access for US\$18 at <https://www.moblab.com>

Lectures

- Mondays, Wednesdays (some Fridays)
 - This Friday, 16 September=Yes
 - other Fridays only with advance notice
 - each week's third hour=tutorial . . .

These overheads

a.k.a., slides, PowerPoints

- I annotate (write and draw on) overheads during lecture
- Unannotated overheads available on the Portal before lecture
- I will not make available annotated versions

My goals for you

- 1 Thinking like an economist
- 2 Understand some canonical models of modern economics and their implications
- 3 Apply these models to novel situations, understand their policy implications

My organizing principles

To learn economics

- 1 Keep up, with ideally an initial review of the readings **before** lecture
- 2 Do problems. Lots of them.

As an economist . . .

As an economist, I believe people respond to incentives . . .

Assessments

	Date	Time	Weight
Warmup Exercise	Beginning each semester.		2%
Participation	Portal Quizzes; MobLab in Tutorial		9%
Term Test 1	Fri, 4-Nov-2016	12 – 2 PM	13%
Term Test 2	Dec. exam period	2 hours	13%
Term Test 3	Fri, 3-Mar-2017	12 – 2 PM	13%
Final Examination	May exam period	3 hours	50%

Term Tests 1 & 3

Note time

Portal quizzes

Start next week; Drop lowest three marks

Tutorials

Start 27-Sept. Must register for MobLab beforehand.

Warmup Exercise

Purpose

To learn more about how to help promote academic and personal success.

Details

Answer questions about personality traits or goals. Access the website on two occasions:

- first couple of weeks of the fall semester (approx. 1 hour)
- first couple of weeks of winter semester (approx. 15 minutes)

Where

<http://warmup.utoronto.ca>

Marks

2% of your final grade. You earn full marks for completing **both** online sessions, and none otherwise.

Portal quizzes

- Due at 11:45 AM on days indicated in syllabus
- One hour from time you start quiz
- Access through Portal (a.k.a. Blackboard)
- Each quiz has 8–10 questions, each with 4 variants
 - For each question, you receive one randomly determined variant
- In-person, small-group collaboration is permitted
- After dropping lowest 3 marks, constitutes majority of participation marks
 - Assume that your computer will crash in March

Online quizzes

Results from 2013–15

- 1 Quiz marks higher than test and exam marks
 - even when I exclude those who missed many quizzes and exams
- 2 Better quiz performance \Rightarrow higher test and exam marks
- 3 More quizzes attempted \Rightarrow higher test and exam marks

Tutorials

- **Goals:** Review and discuss concepts from lecture, to take up problems, and to participate in in-tutorial exercises
- Tutorial Problems and Exercises posted on Portal
 - Please do not ask me or TAs for solutions
 - **Plenty** of solved problems and multiple choice questions with solutions on the Portal
- Each student assigned to one tutorial section
 - All sections: Tuesdays, Wednesdays or Thursdays
- Tutorials meet almost every week; schedule on Portal
 - First meeting: week of 26-September
- Next week, we shall ask you (electronically) which times you prefer

MobLab

- Online platform for economic games, markets and surveys
- Must have MobLab access for each tutorial
 - “Low stakes” writing and problem solving: full marks for credible attempt
 - Participate in games and markets: full marks for sincere participation
 - After dropping your three lowest tutorial sessions, constitutes minority of participation marks
 - Complete MobLab survey by 10:30am on 27-Sept for $\frac{1}{4}$ percent of final grade
- Occasional, announced, MobLab games or markets in lecture
- More points earned in games and markets → higher probability of winning one of multiple end-of-year cash prizes

Term Tests

- Term tests 1 & 3: Fridays from 12–2 PM
- Conflict with another course?
 - Alternate seating from 5–7 PM
 - Will announce procedure for submitting **copy of your course schedule**
 - Alternate seating only if academic conflict from 12–2 PM
- Missed term test?
 - If approved by Prof. Gazzale, you will take a **cumulative** makeup test on Friday 31 March from 9:00 – 11:00 AM
 - If missed due to medial reason, approval only if licensed practitioner confirms you were **unable** to take test
 - Makeup test can only count towards **1** missed term test

Final Grades in ECO100Y

- Historically, average **final** grade across all sections of Economics 100 is C+
- The average **final** grade in each section will vary to reflect the relative performance of students in that section on the common part of the final examination (50 multiple choice questions worth 50% of final exam grade).
- Bottom line: students in a section where the average grade on a term test is low are NOT disadvantaged

ECO100 Assistance

Gluskin = 150 St. George Street

Seek out help while not underestimating the value of struggle.

- Prof. G. office hours (Gluskin Room 330)
 - Drop-in: Wednesdays, 2:30 PM – 3:30 PM
 - By appointment: Thursdays, 10:00 – 11:00 AM
<https://calendly.com/rgazzale/>
- TA office hours
 - 1 Posted on the Portal
 - 2 A ton of extra office hours around tests & exams
- The Economics Study Centre (Gluskin 110)
 - Staffed by upper-year peer mentors
- Self-organized study groups
- Piazza

Moving forward

Wednesday, 14 September

Lecture. Read Micro chapters 1 and 9. First Portal quiz posted Thursday.

Friday, 16 September

Lecture. Read Micro chapter 2, 2a and first half of 8.

Monday, 19 September

First Portal quiz graded at 11:45am. Lecture. No new reading.

Wednesday, 21 September

Lecture. Read Micro chapters 3 and 3a. Second Portal quiz posted Thursday.

Monday, 26 September

Second Portal quiz graded at 11:45am. Lecture. No new reading.

Tuesday, 27 September

Tutorials start. Complete MobLab survey by 10:30am.

P.S.

- Trust me, this course is more difficult than the High School economics course you took

A roundabout way towards defining economics

Observation 1: Scarcity implies tradeoff

- **Scarcity**: when a resource is limited so that all demands for it cannot be satisfied

A thought experiment

- Think about the movie you would most like to see
- **My hypothetical offer:** I will arrange for you to see this movie **for free** at a really nice and really convenient movie theatre, tonight, 8 PM. (I'll even pay for the Uber. Both ways.)
 - **Tonight at 8PM is only option.**
- On the count of 3, raise your hand if you would **not** accept my offer.

Key concept I: opportunity cost

Scarcity implies tradeoffs!

Opportunity cost

Definition The **value** of the alternative foregone when using a resource

Key Question What did I have to give up?

Opportunity cost in the large

Policy evaluation. E.g., increased spending on the environment

- Key question: What would we have done with this money had we not spent it on the environment?
- Opportunity cost = the value of this alternative use

Opportunity cost & the individual

Example: The effect of *in vitro* fertilization on women's investment in advanced degrees

A Silly Question

- Assume you can purchase any album for \$10
- You have \$20 (and only \$20) to spend at iTunes
- You are considering:
 - John Coltrane's *Giant Steps*, which you value at \$14
 - Charlie Parker's *Yardbird Suite*, which you value at \$16
 - Miles Davis' *Birth of the Cool* . . .
- **Silly Question:** You will purchase *Birth of the Cool* only if your value for it is at least how many dollars?

Key concept I: opportunity cost

Example I: *Birth of the Cool* for sale at \$10

- What is the *opportunity cost* of acquiring *Birth of the Cool*?
- **Key Question:** What did you have to give up in order to acquire it?

Key concept I: opportunity cost

Example II: Movie: \$16.00 plus 3 hours of your life

- Because you use the \$16 to go to the movie, you have to give up \$16 worth of other consumption (or savings).
 - Assume you buy 8 fewer \$2 coffees.
 - Give me a dollar **value** (value to you, not price) of this foregone consumption/savings ...
- Because you use this 3 hours to go to the movie, you have to give up 3 hours of time spent on something else.
 - Assume you reduce time hanging out with friends by 3 hours
 - Give me a dollar value of this foregone opportunity ...

Key concept I: opportunity cost

Example II: Movie: \$16.00 plus 3 hours of your life

**The cost of something is what you have to give up to acquire it.
So, what did you have to give up to go to the movies?**

- 1 You gave up \$16
- 2 You gave up the enjoyment of 8 coffees
- 3 You gave up having to pay for 8 coffees
- 4 You gave up 3 hours with friends
- 5 Total opportunity cost:

Positive vs. normative analysis

Assessing tradeoffs

Normative analysis is prescriptive (value judgment, a.k.a., welfare economics)

Positive analysis is descriptive (theoretically verifiable)

Parallel to the “ought” vs. the “is” in philosophy

Economic models

What we are going to do in ECO100

- Simplify to make complex phenomena tractable
 - Translation: we have to leave out (a lot of) details
 - The big question: Does the model make accurate predictions?
 - If no, revisit assumptions. Did we leave out qualitatively important details?
- Qualitative vs. quantitative predictions
- Assumed quantitative skills for ECO100
 - Basic algebra, solving systems of equations
 - Graphing points and lines
 - Deriving and manipulating equations of lines
 - Calculating geometric areas
 - Review: **Chapter 2** Appendix
- Returning to the whole assumption thing ...

The behavioural assumption in economics

Cost-benefit principle

Assumption

People are perfectly-rational “utility” (happiness) maximizers. (Firms are profit maximizers.)

Implications

- Given information, if the benefit of doing something is greater than (or equal to) the cost, do it.
- People are willing and able do this cost-benefit analysis
- Strong version of assumption: Self-interested behaviour . . .

Our first bit of math

When do I spend my money on something?

$$\text{Benefit} \geq (\text{Opportunity}) \text{ Cost}$$

The behavioural assumption in action

Example I: Miles Davis' *Birth of the Cool* for sale at \$10

Question

Under what condition do you rationally purchase Miles Davis' *Birth of the Cool*?

The behavioural assumption in action

Example II: Movie: \$16.00 plus 3 hours of your life

- 1 Assume “value” of movie (to you, in dollars) known with certainty (value=how much you enjoy the movie)
- 2 What is the minimum “movie value” at which you (rationally) go to the movie?
- 3 **ALL** of the following increase the cost of going to the movie, **and thus increase how much enjoyment you must get from the movie to make going rational**
 - A) An increase in the ticket price.
 - B) An increase in the value of what you would otherwise do with the \$16.
 - C) An increase in the value of what you would otherwise do with the 3 hours.

Thinking like an economist II

How many cups of coffee will “B” buy?

What you know:

- **If** only offered the opportunity to buy 2 cups of coffee, the most “B” is **willing to pay** for these 2 cups is \$5 ($WTP(2) = \5)
- In fact, “B” can purchase as many cups of coffee as she wants at \$2 per cup ($P = \2)

The question:

- Will “B” purchase at least 2 cups of coffee with $P = \$2$?

Key concept II: thinking at the margin

A tale of 2 “B”s

Thinking like an economist II

How much → thinking at the margin

Thinking at the margin

Consideration of the benefits/costs of doing marginally more (e.g., one more) or marginally less (e.g., one less) of an activity

Behavioural rule, restated

Keep doing something as long as the benefits (to me) are at least as large as the costs (to me)

Thinking like an economist IIa

Thinking at the margin → ignore **sunk costs**

- **Sunk costs** are costs which cannot be avoided regardless of any action taken
 - Costs already paid and non-refundable
 - Costs you are obligated to pay in the future

Key concept II: thinking at the margin

Summer 2013 Exam; **TFU** = True, False or Uncertain

Assume rationality as defined by an economist. You have already spent millions on a project. If you cancel the project, you incur no more costs and no benefits. If you continue, it costs you an additional \$50 million to finish the project. Once finished, you receive \$100 million with certainty. **TFU:** If you have already spent \$10 million, you should continue the project, but if you have already spent \$90 million, you should cancel the project.

Key concept III: people respond to incentives

The implication of our behavioural rule

- Will get more of an activity if
 - Increase its benefits
 - Decrease its (opportunity) costs
 - Decrease the explicit/direct cost
 - Decrease the benefit of next best alternative
 - Increase the explicit/direct cost of the next best alternative
- Will get less of an activity if
 - ...

Key concept III: people respond to incentives

Beware of the “Law of Unintended Consequences”

Texting while driving (TWD) = bad

- “Clearly”: Make it illegal = \uparrow costs \longrightarrow less TWD

2010 Study: U.S. Highway Loss Data Institute

- 3 out of 4 states: \uparrow texting-related crashes after law introduction
- \uparrow relative to states not passing law
- Potentially plausible explanation . . .

Putting it all together

Economics

the study of how “agents” make decisions on the **allocation** of scarce resources

- **Microeconomics**: the study of how individuals, households, and firms make decisions and interact in markets
- **Macroeconomics**: the study of economy-wide phenomena, including inflation, unemployment, and economic growth

Economic models

- our main tool
- starring Homo Economicus

An “Economic Naturalist”

How do we explain increased college enrolments in the midst of the worst economic downturn in the last 70+ years?

Hint:

Tuition has not been falling . . .