Introduction to Economics Analysis V31.0005

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Office Hours: Fridays 11:00-12:00 and/or by appointment.

Introduction to Economic Analysis is the introductory course of the theory concentration major in Economics. It is intended for students who wish to begin their formal study of economic reasoning with an emphasis on mastering the analytical tools. As such it relies on a higher level of abstraction and focuses on techniques of economic analysis rather than on the understanding of specific economic problems or institutions. It is particularly well suited for those who are interested in pursuing careers or higher degrees in economics or in quantitative fields such as finance.

What do we intend to get out of the course? The simple answer is a better understanding of economic activity and outcomes. One reason for seeking a better understanding is simple intellectual curiosity. Beyond that, a better understanding of economic activity can be useful in at least two ways. First, as a participant in the economic system, better understanding can lead to better outcomes for oneself. That is why business executives (are told to) study economics. Second, the study of economics concerns the efficiency and specific inefficiencies in various frameworks with a view towards policy. What is unique about this course is that we will do so by introducing the language in which economists speak and the "tools" they are using.

Readings:

The following texts are very useful:

Each class specific references will be given. All the books are available at Bobst library (70 Washington Sq. South) and should be available at the NYU Book Center (18 Washington Pl.). Also, the books are available at any of the on-line booksellers. You can check (www.pricescan.com for the lowest price).

Problem sets:

Each week a problem set will be assigned and will be generally due the first class of the following week. The problem sets are meant to be learning tools but will be counted 10% of the course grade.
Mathematics:

How much math do we need? Economists very often express their ideas using mathematical concepts and a special vocabulary simply because these allow them to express themselves more precisely than with ordinal language. Virtually, all the math we will use comes from high school algebra and geometry. Still, more than a little brushing up might be helpful. If you are worried about the math or the special vocabulary of economics, you can relax! Everything will be explained. In any case, you may find the mathematical appendix in Varian (1999) very useful.

Exams:

The requirements for a grade in the class are as follows: There will be two mid-term exams and a final exam (each worth approximately 30% of the class grade). The exams will test your basic knowledge in the course material and the ability to apply this material to new problems.

Outline:

Introduction.
- Economics is a broad-ranging discipline, both in scope and in the methods been used. Rather then trying to define Economics in a single sentence or a paragraph, we will introduce it by letting the subject matter speak for itself.

Preferences.
- This section of the course deals with the characterization of consumer preferences. Basic concepts: completeness, transitivity, monotonicity, well-behaved preferences, perfect substitutes and perfect complements.

Utility.
- The section provides an introduction to the elements of utility representation. Topics discussed include: constructing a utility representation, types of utility functions, marginal utility and the MRS.

Choice and demand.
- This section of the course reviews optimal choice and consumer demand. After we have studied budgets and preferences we put these two notion together to study what consumption bundle is going to be chosen by the consumer with a given budget.

Midterm 1.
- The first midterm examination will be held on Monday, July 11. Further details will be given later in the semester.

Exchange.
- Here, we investigate the fundamental economic problem of distribution in a very simple society. Our aim is to describe what outcomes might arise by giving individuals the opportunity to voluntarily exchange goods. Topics discussed include: competitive markets, equilibrium and the theorems of welfare economics.

Time.
- In this section, by using the techniques that we have already learned, we examine the consumer's over time saving and consumption behavior. This is known as intertemporal choices.

Uncertainty, risky assets and assets markets.
- This section of the course deals with lotteries, expected utility, risk aversion, measuring risk and comparative statics of portfolio problems.
Midterm 2.
- The second midterm examination will be held on Monday, July 25.

Game Theory.
- Game theory is a natural generalization of the single decision-maker theory which deals with how a utility maximizer behaves in a situation in which her payoff depends on the choices of another utility maximizer. Topics include: description of a game, normal form games, solution concepts, Nash equilibrium and mixed strategies.

Extensive-form games.
- The previous section deals with simultaneous moves (one-shot) games. However, many strategic situations do not have this structure. In particular, choices are made sequentially, and player may know the other player's choice before she has to make her own choice.

Information.
- In this section we study markets in which there are differences in information that is costly to obtain. Some of the basic concepts are adverse selection, moral hazard and signaling.

Final
- The final exam will be on August 4.