MICROECONOMICS
ICEF Summer Bridge Course 2023

Course Syllabus

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Course description and objectives

This course is intended to help those students who either didn't take an intermediate microeconomics course before, or took it quite some time ago and feel that they want to refresh the most basic concepts, models and principles in microeconomics before they face them at an advanced, more formalized, level. Because the course is short, we will focus on a relatively small number of topics: demand and supply model, consumer choice under certainty, producer theory, monopoly and some market failures such as externalities and public goods. Among these, consumer choice and producer theory will be treated more extensively and with greater rigor than the other topics, since you will heavily build on them in your main microeconomics course.

Pre-requisites

We only require basic knowledge of undergraduate calculus, and the ability to plot and interpret graphs.

Textbooks

The main textbook is:

- Pindyck, R., and Rubinfeld, D. Microeconomics, 8 ed. Pearson, March 2012.

For some topics, we will also refer to:

- Varian, H. R. Intermediate Microeconomics: A Modern Approach, 8 ed. W. W. Norton & Company. December 2009.

Tentative course outline

Lecture 1: Economics as a science: the problem of allocating limited resources among unlimited wants. Rational maximization, equilibrium, efficiency. Competitive market model: constructing market demand/supply from individual demand/supply curves. Market equilibrium, consumers' surplus, producers' surplus, social surplus. Pareto-efficiency of unregulated market equilibrium. Effects of price controls, taxes/subsidies and price supports. Price elasticity of demand and supply. Elasticity and tax incidence. Cross-price and income elasticity of demand.

Reading:

Varian Ch 1, 15, 16;
Pindyck-Rubinfeld Ch 2;

Lectures 2-4: General consumer choice framework: stable preferences, varying constraints. Axioms of completeness, transitivity, continuity, monotonicity and convexity and their implications for the indifference curves map. Marginal rate of substitution: definition and interpretations. Definition and properties of a utility function. Budget constraint. Utility maximization problem: graphical interpretation and the characteristics of an interior solution. Solution of the UMP: individual demand. Comparative statics of the solution to UMP. Reaction to price change: demand and ”price- consumption” curves. Reaction to income change: ”income-consumption” and Engel curves. Substitution and income effects. Own-price elasticity of demand: ordinary and Giffen goods. The relation between price elasticity of demand for a good and total expenditure on this good. Cross-price elasticity of demand: gross substitutes and complements. Income elasticity of demand: inferior, normal, necessity and luxury goods. Interrelations between elasticities in a two-goods world: income elasticities, own and cross-price elasticities, income and own-price elasticities. Consumer choice with income in kind. Applications: intertemporal choice model, individual labor supply model.

Reading:

Varian Ch 2, 3, 4, 5;
Pindyck-Rubinfeld Ch 3, 4;

Lectures 5-6: Producer theory. Production function and factors of production. Short- and long-run. Isoquant map. Diminishing marginal productivity of inputs, relations between marginal and average input productivities. Marginal rate of technical substitution. Increasing, decreasing and constant returns to scale. Cost minimization problem in the short run and in the long run. Short- and long-run comparative statics of the solution to CMP: expansion path. Interrelations between short-run marginal costs and marginal product of labor, short-run average costs and average product of labor; short-run marginal costs and short-run average costs. Interrelations between short-run and long-run costs. Returns to scale and the shape of long-run total and average cost curves. The price-taking firm’s profit maximization problem. Solution to the PMP: individual supply function. Short-run profit-maximizing choice of a competitive firm and its short-run supply curve. Long-run supply of a competitive firm.

Reading:

Varian Ch 18,19, 20, 21, 22;
Pindyck-Rubinfeld Ch 6, 7;

Lectures 7-8: Monopoly. Types of barriers to entry. Marginal revenue and elasticity. Market power and its measurement. Social costs of market power. Government regulation of monopolistic markets: price ceilings, subsidies. Natural monopolies. The concept of externalities. Externalities in production and consumption. Positive and negative externalities. Remedies: Pigovian taxes/subsidies, cap-and-trade systems. Coase theorem. Tragedy of the commons. Public goods: non-rivalness, non-excludability and the free rider problem. Optimal provision of public goods: Samuelson's equation.

Reading:

Pindyck-Rubinfeld Ch 10, 18;
Varian Ch 25, 35, 37;

In total, there will be ~11 hours of lectures for this course.

Assessment
There will be a final exam comprising 100% of the total grade.