

In the Name of God
Sharif University of Technology
Graduate School of Management and Economics
Economics Principles
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Description

The course is the first course in Economics and is an introduction to the basics of economics and economic analysis. It is centered on three main topics: “What is economics”, “Microeconomics basics”, “Foundation of Macroeconomics”.

At the first step, the basic concepts of economics would be introduced. You learn how economists think and how economic analysis can help us understand the world better

Then, you learn about the foundations of microeconomics to understand how an economic system works. We review the basic analysis of demand, supply, and market equilibrium. Then you learn about competitive and non-competitive markets, price discriminations, externalities and public goods. Then you will get introduced to the roles of governments and the effects of different government’s policies like taxes, subsidies, quotas and rationing.

Third, the course change gear towards the basics of macroeconomics. You will learn basic terminologies of macro like GDP, aggregate prices, inflation, national accounts and ,...

Topics in this class will be covered mainly from a theory perspective, but we will discuss real examples and current debates (Iran and worldwide related issues) during the class in addition to the assigned case studies to prepare you for the real world. Class participation and discussions are encouraged. Having an interactive class helps everyone to better understand the materials. So BE INVOLVED.

With a steady pace, we hope that you find this course lovely, challenging and not difficult. However, hard-working is necessary since the course is demanding. We have articles to read, some videos to watch, and weekly home-works.

Prerequisites

Basic mathematics and multivariate calculus

Required Readings:

- I. Mankiw, Greg, (2023). Principles of Economics 10th edition.
- II. Nili, Masood. (1386) *Principles of Economics*.
- III. (Optional) Becker, Gary, (2008), Economic Theory, 3rd edition

I will also assign additional readings, video, and handouts during the semester; and I post them on the course channel. This material will comprise a part of the exams, unless explicitly marked as optional.

Course Website: <http://gsme.sharif.edu/~madanizadeh/Files/ep>

Course Channel: <https://ble.ir/ep1403>

Administrative issues

Grading:

Problem sets: 30%

Midterm exam: 25%

Final exam: 35%

Quiz: 10%

Problem Sets:

- We Hand in problem sets on Wednesdays and they're due right Tuesdays 1:30 PM.
- Due to "Honor Code", under no circumstances, you can use solutions from last year. It is absolutely prohibited.
- You should work in groups of size two. You can/should collaborate on the problem sets, readings ... but every person should submit his/her own work.
- Deadline to submit your group name is the end of the second week.
- No copying permitted! In case of copying, both persons get zero for the whole problem set.
- No extensions! In case of truly exceptional emergency issues, you must inform the instructor with a valid explanation before the deadline.

- You can drop one problem set. But remember to learn it!
- If you want your problem sets re-graded, you should make your request to your TA within ONE WEEK upon the return of your problem set.
- All the graphs in the problem sets should be plotted by the computer.
- Homeworks should be very neat and clean. Your final answers should be in boxes. Otherwise they're subject to redoing.
- We will post the solutions to the problem sets after the due date.

Exams:

We have a midterm on 1403/09/01 at 9:00AM and a final exam based on the University calendar. Exams consist of problems similar to your problem sets which include the readings as well.

Quizzes are held in class or TA sessions.

Teaching Assistant:

Your TAs will have weekly TA sessions and will go over many sample problems that help you to better understand the course and prepare you to solve the currently assigned problem sets. They would also give you guidance for the assigned problem sets. Attending these sessions is extremely recommended; otherwise you lose a lot of concepts and technical skills since they're complementary to the class materials. Additionally the TAs are holding weekly office hours to answer your questions. Take advantage of these hours to resolve any problems you might have with the materials or problem sets.

Communication:

We post the materials and the announcements on the course channel.

Course Outline

1. What is Economics

I. Introduction:

- What is Economics?
- Why Economics?
- Economics Methodology and Philosophy

II. How economists think

- Economic modeling (B,K)
 - What is it?
 - Role of prices
 - Supply and demand analysis
 - Positive and normative analysis (Friedman)

III. 10 principles of Economics

2. Microeconomics Basics

I. Demand

- Demand elasticity
- Complements and substitutes
- Market demand
- Short run and long run demand
- Shifts in the demand curve

II. Supply

- Supply elasticity
- Market supply
- Short run and long run supply
- Shifts in the supply curve

III. Market equilibrium

- Equilibrium
 - Definition
 - Excess demand and supply
 - Convergence to the equilibrium
 - Equilibrium stability
- Equilibrium analysis
 - Market analysis

- What happens to each individuals
- Short run and long run
- Black market
- Shadow prices
- IV. Household behavior
 - Budget constraint
 - Preferences: Indifference curve
 - Consumer's choice and demand curve
 - Income Elasticity
 - Elasticity of Substitution
 - Price changes: Income and substitution effects
 - Utility Analysis
- V. Firms' behavior
 - Economic and accounting profits
 - Cost
 - Types and measures of costs
 - Firm's decision: marginal and average costs curves
 - Profit maximization and Firm's supply curve
 - Alternative optimizations (utility maximization)
 - Factor demand
 - Labor demand
 - Capital demand
 - Productivity and Technological changes
 - Factor supply
 - Labor supply
 - Capital supply
 - Household production
- VI. Efficiency of Market
 - Market outcome and socially optimum allocation
 - Welfare theorems
 - Surpluses: Consumer and producer
 - Efficient competitive markets
 - Deadweight loss
 - Efficient market hypothesis and rational expectations

- Market failure
- Government policies' effects
 - Taxes
 - Quota
 - Price control
 - Minimum wage law
 - Rationing

VII. Market failure and government role

- Externalities
 - The problem
 - Government solution
 - Private market solution
- Public goods
- Common goods
- Property rights
- Government failure

VIII. Monopolies

- Why does it exist?
 - Rent seeking behavior
- Natural monopoly
- Monopolistic market
 - Behavior of a monopoly
 - Markup
 - Welfare costs
- Role of government
 - Effect of taxes
- Price discriminations
 - The three types
- Antitrust Economics
 - Cartels and collusions
 - Mergers
 - Vertical restrictions
 - Predatory behavior

- Price discrimination

3. Foundations of Macroeconomics

I. Introduction

- What is macroeconomics and why?
- National accounts
- Real and nominal values
- Prices:
 - CPI, PPI,...

II. Economic Growth

- Stylized facts
- Capital investment
- Solow models
- Conditional convergence
- The golden rule
- Productivity growth
- Neoclassical growth models

III. Money, inflation and unemployment

- Money
 - History
 - Role of money
 - Definitions of M_0, M_1, \dots
 - Stylized facts about money, inflation and interest rates
- Inflation
 - Theory : Money demand equation of exchange
 - Neutrality
 - Empirical results
 - Cost of inflation

IV. Open economies

- Balances
- Exchange rate
 - Nominal and Real Exchange rate \
 - PPP
 - Long run equilibrium

- Marshal theorem
- Interest rate and capital accounts
- Exchange rate policies
 - Peg and float
 - Exchange rate Trilemma