MobLab
A playground for decisions

Topic Coverage: Varian: Intermediate Microeconomics*

Equilibrium and Efficiency
Textbook Chapter: Chapter 1
MobLab Game: Competitive Market
Key Teaching Points:
- The "invisible hand" of the market: how individual profit maximization leads to competitive market equilibrium.
- Price discovery: the equilibrium market-clearing price results from the valuations of different buyers and costs of different sellers.
- Gains from trade (i.e., consumer and producer surplus).
- Shifts in either supply or demand change equilibrium outcomes.

Market Interventions
Textbook Chapter: Chapter 1
MobLab Game: Competitive Market (with interventions)
Key Teaching Points:
- Government interventions (per-unit taxes, subsidies, price ceilings and floors) alter equilibrium outcomes.
- Equilibrium outcomes do not depend on whether buyers or sellers pay the tax.
- The difference between tax incidence and who pays the tax.
- Relative elasticities determine incidence of a tax or subsidy.
- Excess supply (price floors) and excess demand (price ceilings).
- The efficiency implications of government interventions.

Utility Maximization
Textbook Chapter: Chapter 5
MobLab Game: Consumer Choice: Cobb-Douglas
Key Teaching Points:
- Become familiar with the Cobb Douglas utility function.
- Monotonic transformations of a utility function do not affect the utility-maximizing consumption bundle.
- Utility maximization can be achieved by sequentially choosing the item with the highest marginal utility per dollar.

Time Preferences
Textbook Chapter: Chapter 10
MobLab Game: Time Preferences: Budget Sets
Key Teaching Points:
- Helps player understand the tradeoffs they are willing to make between money today and money in the future.

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* 8th edition.

Asset Valuation

Textbook Chapter: Chapter 11
MobLab Game: Bubbles and Crashes
Key Teaching Points:
- Highlights the determinants of an asset's value: income generated from interest and dividends as well as resale value.
- Shows how asset bubbles may develop even with complete information.

Tradeoffs Involving Risk and Time

Textbook Chapter: Chapter 12
MobLab Game: Bomb Risk-Game
Key Teaching Points:
- Helps the player understand expected value and thinking on the margin.
- Helps a player understand her own preferences towards risk, and how risk attitudes vary across a population.

Auctions

Textbook Chapter: Chapter 18
MobLab Game: Auctions (Ascending, Descending, Sealed Bid, and more)
Key Teaching Points:
- Gain bidding experience in different auction formats.
- Shows revenue equivalence between the first and second-price auctions.

Firm Behavior in a Competitive Market

Textbook Chapter: Chapter 20
MobLab Game: Production, Entry & Exit
Key Teaching Points:
- Short run profit maximization involves thinking at the margin.
- In the long run equilibrium of a competitive market with identical firms, all firms earn zero economic profits.

Monopoly Pricing

Textbook Chapter: Chapter 25
MobLab Game: Cournot (with Group Size=1)
Key Teaching Points:
- Monopolies restrict output in order to increase price.
- The tension between the quantity price effects of increased output.

Unemployment

Textbook Chapter: Chapter 27
MobLab Game: Simple Labor Market
Key Teaching Points:

- When a perfectly competitive market determines wages, the equilibrium wage (per unit of labor) is equal to the value of the marginal product of labor of the last worker hired.
- Employment levels are determined by both the supply and demand of labor.
- Policies such as a minimum wage or unemployment insurance affect structural unemployment.

Oligopoly and Collusion

Textbook Chapter: Chapter 28
MobLab Game: Cournot
Key Teaching Points:
- The underlying logic of the Cournot model: how market price is determined by aggregate output.
- The equilibrium outcomes of Cournot competition.
- Repeat interaction may lead to collusive behavior.

Game Theory

Textbook Chapter: Chapters 29 & 30
MobLab Game: Rock, Paper, Scissors
Key Teaching Points:
- Key features of games: payoff matrices, best responses and dominant strategies.
- Identification of the Nash equilibrium.

MobLab Game: Prisoner's Dilemma (Push/Pull)
Key Teaching Points:
- Key features of games: payoff matrices, best responses and dominant strategies.
- Identification of the Nash equilibrium.
- The (sometimes) conflicting incentives of cooperation and self-interest.
- Repeated play may lead to more cooperative outcomes.

Behavioral Economics

Textbook Chapter: Chapter 31
MobLab Game: Behavioral Economics Template
Key Teaching Points:
- Behavioral economics templates allow professors to explore framing effects, heuristics, and biases with their students including representativeness, anchoring, availability, and more. Each of these help to illustrate departures from the standard rational choice model.

Externalities

Textbook Chapter: Chapter 35
MobLab Game: Externalities with Policy Interventions
Key Teaching Points:

- With externalities, the equilibrium of a competitive market without interventions is inefficient.
- By reducing transactions, a tax can increase efficiency (total surplus) in a market with a negative externality
- Marketable permits for an activity generating a negative externality leads to efficiently reducing that activity.

Public Goods

Textbook Chapter: Chapter 37
MobLab Game: Public Good: Linear
Key Teaching Points:
- Highlights the features of public goods: non-rival and non-excludable.
- Demonstrates the distinction between private and social benefits of public goods.
- Shows how individual profit maximization leads to the free-rider problem.

Asymmetric Information

Textbook Chapter: Chapter 38
MobLab Game: Market for Lemons
Key Teaching Points:
- Experience in a market with asymmetric information.
- Asymmetric information may lead to adverse selection and market failure.