

- I. Overview
 - A. What is the organic view of the role of government? the mechanistic view?
 - B. In the US, what powers does the federal government have? states? local governments?
 - C. Size of government
 - 1. What is the trend for total government expenditures as a percentage of GDP?
 - 2. What are the primary expenditures for the federal government? state and local government? Note any significant changes over time.
 - 3. What are the primary revenue sources for the federal government? state and local government? Note any significant changes over time.
- II. Tools of positive analysis
 - A. How is positive analysis different from normative analysis?
 - B. If economic theory predicts that "If X, then Y" how can we verify that theory? What are the limitations of each approach?
- III. Microeconomics
 - A. Consumer theory
 - 1. In a model with two products, show the budget constraint. What is its slope?
 - 2. What is an indifference curve? What can it NOT do? What is its slope?
 - 3. Show the point on the budget constraint that maximizes utility. What is the resulting utility-maximizing condition?
 - 4. Show the result of (1) an increase in the price of one of the products and (2) an increase in income.
 - 5. What are the income and substitution effects? Show them graphically.
 - B. Producer theory
 - 1. What is the shape of a typical MC curve? Why?
 - 2. Given the market price (P), what quantity of output maximizes a firm's profits?
 - C. Producer and consumer surplus
 - 1. Read vertically, what does the demand curve for a product measure? What does the supply curve measure?
 - 2. What is the definition of consumer surplus? of producer surplus? How does each appear graphically?
- IV. Welfare (normative) economics
 - A. What is the difference between general equilibrium and partial equilibrium?
 - B. Pure exchange economy
 - 1. What does a consumer's marginal rate of substitution (MRS) represent? What is the value based on?
 - 2. What should two consumers do if they have different MRSs?
 - 3. When is the outcome of trade Pareto efficient?
 - C. Exchange + production economy
 - 1. Show a typical production possibility curve for a given amount of resources.

2. What does the marginal rate of transformation represent? What is its relationship to the marginal cost of each product?
 3. What are the Pareto–efficiency conditions?
- D. Fundamental Theorems of Welfare Economics
1. First Theorem
 - a) In a competitive economy, with consumers and producers reacting to market prices, why is the Pareto–efficiency condition satisfied?
 2. Second Theorem
 - a) What is the utility possibility curve? Why is it downward sloping? In a market economy, what does our location on that curve depend on?
 3. What does a social welfare function depend on? Is it just the sum of each person's utility? What does a social indifference curve look like?
 4. Where is the optimal point for society? How can society reach that point in a market economy?
 5. If an outcome is Pareto-inefficient, and the economy moves to a Pareto–superior point, what can you conclude about the winners and losers? What can the winners do to convince the losers to move to that point?
- E. Market failures
1. How does market power result in Pareto-inefficiency? What does this say about the loss to consumers and the gain to producers from market power?
 2. How can markets fail to exist?
- F. What are limitations to the welfare economics approach?
- V. Public goods
- A. What are the two attributes of a pure public good? a pure private good?
 - B. Explain (1) the continuum between these two types of goods, (2) how classification of goods in that continuum can change, (3) some things are not "commodities" are public goods, (4) how the value placed on one more will vary across consumers (and why this is not true for private goods), (5) that the government produces some goods that are private, not public, in nature, and (6) that the government allows private firms to produce some public goods.
 - C. How are demand curves for the individual consumers combined for a private good? for a public good? Show the efficient outcome.
 - D. For private goods, which is equal across consumers, the value of the last unit or the number of units consumed? for public goods? State the efficiency condition for each type.
 - E. Why is the efficient outcome unlikely to occur in markets for public goods?
 - F. Why is it unlikely even if the good is excludable, but still non-rival? Hint: You will need to distinguish the amount of the product from the number of consumers.
 - G. Do people actually act as free-riders in all situations? Why not?
- VI. Externalities
- A. What is the definition of an externality? If you buy more of a product, raising the price to everyone else, is that an externality?

1. In what sense is a public good an externality? In what sense is correcting an externality a public good?

B. Pollution

1. If pollution is created when a good is produced, show Q^* and the competitive market equilibrium (Q_e). Label all curves. Show the deadweight loss and discuss the winners and losers if output moves from Q_e to Q^* .
 - a) What does it mean if MEC is upward sloping? Why is this a common assumption?
2. Why is it difficult to find Q^* ?
3. Private solutions (discuss efficiency, fairness and the incentive to innovate)
 - a) What is the Coase Theorem? How does the solution depend on who has the property rights?
 - b) How can mergers correct an externality?
 - c) How can social pressure be used to correct an externality?
4. Public solutions (discuss efficiency, fairness and the incentive to innovate)
 - a) How does a Pigouvian tax correct an externality? a Pigouvian subsidy?
 - b) Why is direct government regulation likely to be inefficient?
 - c) Why is issuing permits less inefficient (but still not efficient)?
 - d) How will allowing firms to trade permits increase efficiency?

C. Positive externalities

1. In what sense do home ownership and higher education create an externality? What government programs does this explain?