

Microeconomics and Public Policy

(Total 60 academic hours)

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Outline

This course provides lectures of the theory and examples on the problems of the market economy, government, public policy, industry and environment. The lectures start from the theoretical explanations on economics and public policy, such as tax, subsidy, market intervention, child education, medical services, regulations and environmental problems. These issues are keys for formulating the framework of the country for its sustainable development. The case discussions will follow the lectures, where all students are expected to make the contributions to the discussions and the presentations, in order to design the framework for economic and social development of Ukraine for the future.. At the end of course, the practical exercise will be provided for the students to prepare the action plans for constructing the sustainable country.

As the expected outcome, the students get the skill to design the public policy for formulating the framework of the sustainable development and the governance.

The lecture will be carried out in English. But, when necessary, there will be appropriate pause for the necessary Ukrainian translation by the volunteer students with higher English skill. Throughout the course, important explanations will be written on the blackboard in sentences and in graphics. And, the students will have enough time to take notes of the blackboard.

The score of each student will be assessed with the following system: 20 % upon his/her attendance rate at the lectures, 20 % upon the performance of the homework, 20 % upon his/her contributions at the discussions and/or presentation during the lectures and practical exercises, and 40 % upon the writing examination for one hour after the end of the course. The result of each student's score will be indicated as in the following grades:

91-100	A	Excellent
86-90	B	Good
76-85:	C	Good
70-75:	D	Satisfactory
60-69:	E	Satisfactory
0-59:	F	Failed

The brief description of each academic hour is as described in the following pages:

Academic hour – 1 and 2:

a. Introduction

The outline of the course will be explained, and then the rules of the course evaluation of each student will be explained, including the attendance, homework, contribution at the classroom and the examination.

b. Topic 1: Demand curve, supply curve, and price equilibrium

Demand curve, supply curve and the price equilibrium are explained, as the starting point of the microeconomics theory. The students are expected to understand that both the buyers and the sellers (suppliers) of the consumer products have their own wishes to decide how much they wish to buy or sell the products at different prices of the product at the market.

c. Topic 2: Characteristics of the planned economy

A difference between the market economy and the planned economy is also explained, in order to illustrate the characteristics of the market economy such as that the suppliers can select the quantity of the production upon the market price.

Academic hour – 3 and 4:

a. Topic 3: Price setting by the government

As the first example of the governmental interventions to the market economy, the price ceiling is explained. In the market economy, the market forces are still relevant even when the market is not allowed to determine the price because of the governmental intervention with the price ceiling. The example of the oil embargo in 1973 and 1974 in the US will be introduced as an example of the effect of the price ceiling.

b. Topic 4: Governmental subsidy to particular industry

A case of the governmental purchase of apples in the market is explained as an example of the governmental subsidy to a particular industry. This example makes a contrast to the price ceiling in the Topic 3, because the governmental price is set above the market's price equilibrium in this case; while, the governmental price is set below the market's price equilibrium in case of the price ceiling.

Academic hour – 5 and 6:

a. Topic 5: Budget line

As the next step of the basic microeconomics theory, the concept and example of the budget line is introduced. The budget line set the boarder of the consumer's choice on how much he or she buys the consumer products such as foods; and, it also explains how the income change and/or the price change influence the consumer's choice.

b. Topic 6: Consumer's indifference curve

The indifference curve is a graphic presentation of a consumer's preference, which is to be shown together with the budget line. The price equilibrium of a consumer's preference is shown at the point on the budget line, where his or her indifference curve is tangent to the budget line. And then, the concepts of normal goods and inferior goods are explained on the graphic of the budget line and the indifference curve. The examples of the normal goods and the inferior goods are also shown.

Academic hour – 7 and 8:

a. Topic 7: Food stamp program:

Food stamp program is the governmental policy that offers free foods to the eligible low income families. The budget line and the indifference curve will explain a person's preference on the food consumption.

b. Topic 8: Cash grant program for helping the poor families:

Cash grant program is another option for the governmental food support for the poor families. However, the cash grant has a problem in limiting the poor family's expenditure only for foods. While the food stamp program also has a possibility to formulate a black market of the food stamp for getting cash for some people. The discussion will be made one of the serious issues of the public policies about the questions on whether the families are really poor or not.

Academic hour – 9 and 10:

a. Topic 9: Price change and consumer's choice:

In this lecture and the exercise, the students will see how the price change affects the consumer's preference in choosing the quantity to purchase the consumer products in the market. Again, the budget line and a consumer's indifference curve will give the graphic image of the theory.

b. Topic 10: Income effect and substitution effect of price change:

When the price of a good changes, the change affects consumption in two different ways, which are the income effect and the substitution effect. The indifference curve and the budget line explain the theory.

Academic hour – 11 and 12:

a. Topic 11: Complement and substitute:

One of the factors that influence the demand for a good, the influence of closely related good, is explained. The closely related good has two possibilities: one is the complement and another is the substitute.

b. Topic 12: Price elasticity of demand:

Price elasticity of demand is an index that indicates how responsive quantity demanded is to a change in price. Graphic presentations will be shown to illustrate the characteristics of the elasticity, together with the examples in the real data in the market. Income elasticity and cross-price elasticity of demand are also explained.

Academic hour – 13 and 14:

a. Topic 13: Excise subsidy:

An excise subsidy is a form of subsidy in which the government pays part of the per-unit price of a good and allows the consumer to purchase as many units of the good at the subsidized price. An unrestricted cash grant is also explained to compare with the characteristics of the excise subsidy.

b. Topic 14: Public schools:

A more common form of subsidy is one in which the government makes a certain quantity of the good available to a consumer at no cost, or at cost below the market price. The essential characteristic of this type of subsidy is that the quantity of the good being subsidized is beyond the control of the recipient. As the most important example of this type of subsidy, the provision of public schools is introduced.

Academic hour – 15 and 16:

a. Topic 15: Voucher proposal instead of public school

Another option of the subsidy to the education is the voucher proposal, which is a major change in public school finance. With a voucher program, parents receive vouchers that could be used to purchase education at any school they choose, while the public school program limits the parent to choose one school.

b. Topic 16: Fringe benefits:

Employees receive compensation from their employers in two different forms: cash salaries and fringe benefits. Fringe benefits are goods or services provided directly to employees and paid for by the employer. They include such items as medical insurance, life insurance, contributions to pension funds, parking facilities, meals and use of recreational facilities. The graphical presentations will be given with the budget line and the indifference curve.

Academic hour – 17 and 18:

a. Topic 17: Gasoline tax and tax rebates:

Since the Arab oil embargo in 1973, there have been numerous proposals designed to encourage the consumers to cut back on their use of gasoline. One such proposal involves the use of a large excise tax on gasoline to raise its price and thereby induce a reduction in consumption. Realizing that such a large tax would place a heavy burden on many families, most proponents of this approach recommend that the revenues raised by the tax be returned to the consumers in the form of unrestricted cash transfers, or tax rebates.

b. Topic 18: Inter-temporal consumer choice:

This lecture refers to the way consumers rearrange consumption over time (inter-temporally) by saving or borrowing. A simple model is introduced to set a short-lived individual whose lifetime spans two time periods, year 1 (this year) and year 2 (next year). The interest rate and the endowment points are explained in the graphic.

Academic hour – 19 and 20:

a. Topic 19: Change in endowment:

This lecture is a continuation of the Topic 18. The budget line relevant for inter-temporal choice depends on current and future income as well as the rate of interest. Any change in one or more of these variables will cause the budget line to shift and will involve a change in the consumer's preference.

b. Topic 20: Change in the interest rate:

This lecture is also a continuation of the Topic 18. A question "Will people save more at a higher interest rate?" will be examined in this topic. A higher interest rate changes the relative cost of present versus future consumption, which is reflected in a change in the slope of the budget line.

Academic hour – 21 and 22:

a. Topic 21: Human capital and inter-temporal choice:

In the Topics 18 – 20, it was examined that a consumer can alter his or her other consumption pattern over time by borrowing or saving at the market interest rate. However, borrowing and saving are not the only ways people can affect the time pattern of their consumption. Another way is through direct physical investment. Funds can be directly invested in the present and the return to that investment used to augment future consumption. Inter-temporal consumption model is used to examine an important form of investment: investment in human capital.

b. Topic 22: Borrowing as a method of finance:

When the current earning of a student to invest in his or her own education is limited, there are the other methods of finance, such as borrowing, parental assistance, and government subsidies. In this lecture, the inter-temporal consumer choice model is extended to include borrowing.

Academic hour – 23 and 24:

a. Topic 23: Consumer Price Index (CPI):

The Consumer Price Index is intended to measure the change in the overall price level of the market. This index is used for a variety of purposes in both the public and private sectors. The index is shown in equations and in a graphic presentation, together with the examples in market.

b. Topic 24: Consumer surplus

The consumer surplus refers to the net benefit, or gain, secured by an individual from consuming one consumer choice instead of another. The graphical presentation is given with the demand curve, budget line and indifference curve.

Academic hour – 25 and 26:

a. Topic 25: Exchange, efficiency, and prices

From this lecture, the way a typical consumer reacts to changes in his or her budget line will be introduced, including higher or lower prices of incomes, subsidies, and taxes. In the previous lectures, the budget line reflected the willingness of the consumer to trade, but from this lecture, an emphasis will be given to more on that the market choices of a consumer involve exchanges between the consumer and other people.

b. Topic 26: Two person exchange:

The Edgeworth exchange box diagram is used to examine the allocation of fixed total quantities of two goods between two consumers. Further more, in the Edgeworth box diagram, the indifference curves of two consumers will be shown to indicate the quantity to be traded by the two people theoretically.

Academic hour – 27 and 28:

a. Topic 27: Efficiency in the distribution of products

Economic efficiency is a characteristic of some resource allocations that is highly regarded by economists. Efficiency is defined in terms of the well-being of people. Roughly speaking, an efficient outcome is one that makes people as well off as possible, taking into account all the factors that influence their well-being. In this lecture, the economic efficiency is explained as it relates to the way fixed total quantities of products are distributed among consumers. The graphic presentation will be given, again, in the Edgeworth box diagram.

b. Topic 28: Many-person exchange:

In the two-person model of exchange, which was explained in the previous lectures, the exact outcome of bargaining cannot be predicted. In the real world market, buyers and sellers are rarely observed haggling over price because in most cases there are many buyers and sellers in any given market. With many buyers and sellers, each individual will behave like a price taker. This is, since consumers acting individually cannot affect the price perceptively by haggling, they take the price as given and buy or sell whatever quantities they wish at that price. This situation will be explained, again, in the two person exchange model in the Edgeworth box diagram.

Academic hour – 29 and 30:

a. Topic 29: Consumer equilibrium and efficient distribution:

In this lecture, the consumer equilibrium is explained in view of the efficient distribution. For this explanation, the budget line of a consumer with his or her indifference curve is shown in the Edgeworth box diagram.

b. Topic 30: Food stamps and black market:

With the Edgeworth box diagram, the black market of the food stamps will be explained graphically. This lecture gives further theoretical insight of Topic 7.

Academic hour – 31 and 32:

a. Topic 31: Price and Non-price Rationing and Efficiency:

In open markets, prices serve a rationing function in determining how much of available quantities each consumer will get. The rationing function, and whether it is accomplished efficiently or inefficiently, is what this lecture explains. An example of gasoline rationing will be explained in the demand curve.

b. Topic 32: Production:

While until the previous lecture, the focus was made on the consumer's behaviors, the analysis of the factors that determine the quantities of commodities that firms will produce and offer for sale starts. To start with, the hypothetical production function for wheat is explained.

Academic hour – 33 and 34:

a. Topic 33: Production Isoquants:

An isoquant is a curve that shows all the combinations of inputs that, when used in a technologically efficient way, will produce a certain level of output. Production isoquants show how much output a firm can produce with various combinations of inputs.

b. Topic 34: Short-run and long-run production responses:

Production isoquants illustrate all the ways a firm can produce given levels of output. In some instance, the firm may not have the option of choosing from among all the input combinations shown by an isoquant. The explanation will be made how the time-periods are related to the production.

Academic hour – 35 and 36:

a. Topic 35: Diminishing marginal return of labor:

The concept of average physical product and marginal physical product of an input are introduced to examine the relationship between output and various quantities of labor. The marginal physical product of an input can be defined as the change in total output that results from a one-unit change in the amount of the input, holding the quantities of other inputs constant. In a numerical example, amount of land used for producing wheat, amount of labor, total output, average product of labor and marginal product of labor will be shown, to make the students understand these concepts.

b. Topic 36: Total, average and marginal product curves:

The information in Topic 35 will be further presented graphically to discuss the Law of Diminishing Marginal Returns.

Academic hour – 37 and 38:

a. Topic 37: The cost of production:

When a firm makes its decision about how to produce, it must not only determine what inputs are necessary to produce various levels of output, but it must also consider the costs of acquiring the inputs used to produce the products. Since production costs are important in determining a firm's output, several aspects should be understood about a firm's costs: how costs are defined (what they include), what factors affect the costs, and how costs vary with the output produces. The nature of costs and the concept of opportunity cost will be introduced in this lecture.

b. Topic 38: Short-run cost of production:

A firm's production costs will vary with its rate of output. Exactly how costs are likely to vary with output in the short run is discussed in this lecture. A numerical example will be shown to explain how short-run costs vary with output for a hypothetical firm.

Academic hour – 39 and 40:

a. Topic 39: Short-run cost curves:

Using the firm's cost curves, examinations will be made to look at the relationship between cost and output. Marginal cost, average cost, and marginal-average relationships are explained.

b. Topic 40: Long-run costs of production:

In the long run, a firm has sufficient time to adjust its use of all inputs to produce output in the least costly way. Because a firm can augment plant and equipment by constructing additional facilities or by purchasing already existing facilities, all inputs are variable. This lecture is given to show how a firm will choose to combine inputs in its production process when all factors are variable.

Academic hour – 41 and 42:

a. Topic 41: Long-run cost curve:

While in a short run, the firm has total fixed cost, total variable cost, and total (combined) cost. But in a long run, there is only one long-run total cost. This characteristic is shown graphically, to compare with the short-run cost curves.

b. Topic 42: Costs and restrictions on input use:

The firms have incentive to choose combinations of inputs that minimize the total cost of producing whatever level of output they produce. A case of hospital is shown. In response to rapid increase in hospital costs, many states have adopted regulatory policies intended to keep costs from rising quickly. One approach has been to use certificate-of-need laws under which a hospital is prohibited from adding to its supply of hospital beds without the permission of a state-designated agency. A graphical presentation will be provided to explain this case.

Academic hour – 43 and 44:

a. Topic 43: Input price changes and cost curves:

Per-unit output costs vary with output along a cost curve because the physical productivity of the inputs varies with the rate of output, not because the costs of inputs vary. If a firm increases its employment of land, engineers or gasoline, this expansion will not cause a perceptible increase in the total market demand for these inputs, and the prices will not be noticeably affected. The argument will be given in graphic presentations.

b. Topic 44: Using cost curve: controlling air pollution (Part 1):

The cost of pollution abatement will be discussed, with the cost curves of the firm. The case of two polluting firms is discussed, and how reducing the amount of pollution could be achieved at the lowest possible cost is indicated.

Academic hour – 45 and 46:

a. Topic 45: Profit maximization:

The cost curves of a monopolist or oligopolies will be influenced by the same factors that affect the cost curves of a competitive firm. The basic determinants of costs are the prices and the productivities of inputs. But, the level of output a firm will produce cannot be explained only by the cost conditions alone, because the cost curves only identify the minimum costs at which the firm may produce various outputs. To know the level of output, the goal of the firm needs to be specified. In this lecture, the individual firm's output decision will be explained, by discussing the meaning of profit maximization.

b. Topic 46: The demand curve facing the competitive firm:

The profit maximization for the output of a firm selling its product in a competitive market is explained, in the demand curve.

Academic hour – 47 and 48:

a. Topic 47: Short-run profit maximization:

In the short run, a competitive firm with a fixed plant can vary its output by increasing or reducing its employment of variable inputs. How the firm decides on the actual level of output to produce is explained in this lecture.

b. Topic 48: Long-run profit maximization:

At any time, the short-run scale of plant the firm has built reflects a previous long-run decision. As a result, it must be considered how the goal of profit maximization guides the long-run decisions of firms. The same principles that were used in for the short-run setting apply to long-run profit maximization, but the long-run cost curves will be employed, which allow a sufficient period of time to vary all inputs.

Academic hour - 49 and 50:

a. Topic 49: Output response to a change in price:

In this lecture, a systematic relationship between the price of the product and the most profitable level of output is discussed. How the firm responds to price changes will be shown in a graphic presentation with Marginal Cost curve and Average Cost curve.

b. Topic 50: Profit maximization and controlling pollution (Part 2):

Following the Topic 44, further discussion will be given on how to divide the responsibility for abating pollution between the two firms in a way that marginal costs were equal.

Academic hour – 51 and 52:

a. Topic 51: The competitive industry:

From this lecture, the emphasis is shifted from the individual firm to the competitive industry. A new model will be introduced to explain the determination of the total output of a good (as distinct from the output of only one firm) and the price at which it will be sold.

b. Topic 52: The short-run supply curve:

In the short run a competitive firm will produce at a point where its marginal cost equals the price, as long as the price is above the minimum point on its average variable cost curve. In other words, each firm's marginal cost curve indicates how much the firm will produce at alternative prices. As a first approximation, the short-run industry supply curve is derived by simply adding the quantities produced by each firm that is by summing the marginal cost curves horizontally.

Academic hour – 53 and 54:

a. Topic 53: Long-run competitive equilibrium:

In a long run competitive equilibrium, the independent plans of firms and consumers mesh perfectly. Each firm has adjusted its scale of operations in light of the prevailing price and is able to sell as much as it chooses. Consumers are able to purchase as much as they want at the prevailing price. There are no incentives for any firm to alter its scale of operations or to leave the industry and no incentives for outsiders to enter the market. Unless market conditions changes, the price and rate of output will remain stable. The argument will be given in the graphic presentation.

b. Topic 54: The long-run supply curve:

The long-run supply curve summarizes much of what we need to know to analyze the behavior of firms in competitive markets. It shows the total amount of a good that will be offered for sale per time period at alternative prices when firms have adequate time to adjust fully to the price. In this lecture, the derivation of this relationship will be explained.

Academic hour – 55 and 56:

a. Topic 55: Why firms exist? When does competitive model apply?

Discussion will be given as a wrap up of the lectures on the competitive firms' productions.

b. Topic 56: How many firms are enough?

The firms face highly elastic (ideally, perfectly horizontal) demand curves, and assuming a large number of small firms relates to the elasticity of demand facing a given firm, however, the elasticity of demand facing each firm can be quite high with relatively few firms in the industry.

Academic hour – 57 and 58:

a. Topic 57: Excise taxation, using the competitive model:

Theoretical insight will be given to the meaning of the excise taxation upon the firm and the industry.

b. Topic 58: Who bears the burden of the tax?

How much output falls and how much the price to consumers rises is equivalent to asking how much of the tax burden is borne by consumers and how much by input owners. The explanation will be given as the elasticity affects the tax burden.

Academic hour – 59 and 60:

a. Topic 59: Rent controls and airline regulation

The examination will be given to the rent control, which the government controls the price of rental housing. Also, the governmental regulation of the airlines' fare and routes will be examined.

b. Topic 60: The city taxicab markets and the import quotas of the automobile industry:

Usually, the regulations require that taxis have license issued by the city. This eventually limits the number of taxis in operation. The examination will be made on how taxicab markets operate under these regulations. The history in that US automobile industry lost its ground by the Japanese industry will be examined, in terms of gasoline prices and regulation. Also, the effects of the import quotas will be analyzed.

This course may continue in the next academic year. The topics will be:

1. Using the Competitive Model

- Excise taxation
- Who bears the burden of the tax?
- Rent controls
- Airline regulation and deregulation
- City taxi cab markets
- The automobile industry and import quotas
- Farm policy (acreage restriction, target price subsidies, international market, sugar price support program)
- Safety regulations
- The supply of exhaustible resources

2. Monopoly

- Nature of monopoly
- Sources of monopoly power
- The Monopolist's demand and marginal revenue curves
- Profit maximizing output of a monopoly
- The welfare cost of monopoly

3. Using monopoly theory

- Excise taxation
- Regulating the price of monopoly
- Natural monopoly (ex. Electric utility companies)

- Cartels
 - Price discrimination
 - Peak load pricing
4. Monopolistic competition and oligopoly
 5. Employment and pricing of inputs
 6. Wages, rent, interest, and profit
 7. Using input market analysis
 - Minimum wage law
 - Social security tax
 - Cartel
 - Discrimination in employment
 - Negative income tax
 - Corporation income taxes
 - The economic effects of deficits
 8. General equilibrium analysis
 9. Welfare economics
 10. Public goods and externalities