



HIC TUTA PERENNAT

**FEDERAL AGENCY ON EDUCATION
SAINT PETERSBURG STATE UNIVERSITY**

SCHOOL OF MANAGEMENT

«APPROVED»
Program Director

«APPROVED»
Deputy Dean

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« » _____ 2006

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COURSE SYLLABUS

**INTRODUCTION TO BUSINESS ADMINISTRATION: ECONOMICS
(MANAGERIAL ECONOMICS, Part I)**

Program:	MIB (MITIM)
Code of the course:	<i>According to program curriculum</i>
Course status:	<i>Elective for MIB (core for MITIM)</i>
Workload:	<i>1 ECTS, 20 hours of classes</i>
Language of instruction:	<i>English</i>

Professor:

Sokolova E.V., Senior Lecturer

Reviewers:

(Name and title)

(Name and title)

Saint Petersburg
2008

1. ORGANIZATION OF THE COURSE

1.1. Course objectives

The course aims to provide a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the economic system. The primary emphasis is placed on the nature and functions of product markets.

The course covers microeconomic concepts relevant to managerial decision-making and provides the economic analysis necessary to guide these decisions. Decision making is woven throughout every topic of the course.

1.2. Place of the course in the educational program curriculum

Being mostly theoretical, the course gives students tools to develop their theoretical skills and apply them to decision-making process at their practical experience.

Topics named in course are intended for an introductory course for the MIB program. Introductory courses in calculus are required.

1.3. Key skills developed by students

The key skills developed by the students are knowledge of the main tools and models of microeconomics. Further ability to use tools and models provided in research activity is evolved.

2. COURSE CONTENT

2.1. Description of course topics

Topic 1. Basics of economic analysis

The topic provides basis for economic analysis, covering such issues, as economic optimization, functional relations, the ways for expressing economic relations, etc.

Topic 2. Demand and supply

Topic 2.1. Individual consumer demand

The topic covers general issues of the utility theory, including analysis of marginal utility and indifference curves concepts. Individual demand curves and consumer surplus are analysed.

Topic 2.2. Market demand and supply

The topic covers such issues as market demand and market supply, taking into consideration studying demand and supply shifters, consumer and producer market surplus, and market equilibrium. Price restrictions impact on market equilibrium is analysed. Also the elasticity concept is covered.

Topic 3. Production analysis and cost analysis

Topic 3.1. Production policy

The concept of production function is studied. Following questions are examined: returns to scale and returns to a factor, measures of productivity, law of diminishing returns to a factor, marginal rate of technical substitution, isocosts, etc.

Topic 3.2. Theory of cost

Studying theory of cost assumes to place emphasis on following issues: short-run and long-run cost functions, marginal cost concept, relations among costs, cost elasticities and economies of scale, etc.

Topic 4. Market structure analysis

Topic 4.1. Perfect competition and monopoly

Characteristics of perfect competition and monopoly are analysed. The main attention is paid on profit maximization in these markets. Role for government is studied.

Topic 4.2. Monopolistic competition and oligopoly

Monopolistic and oligopolistic competition characteristics are compared, as well as monopolistic and oligopolistic competition price/output decisions.

2.2. Individual and group work (teaching methods, projects, presentations, in-class assignments etc.)

1. *Individual in-class assignments.* Three individual assignments (after the end of the corresponding group of topics). Each assignment includes 5 multiple choice questions. The student can receive 5 points for each group of topics and these points will be considered in final mark. Respectively the individual assignment can give 15 points.
2. *In-class group work.* In-class group work will take place at seminars and will include discussion of cases and answering given questions. This work doesn't give any point for final mark.

3. COURSE OUTLINE

3.1. Time allocation between course topics (in hours)

#	Topic	TOTAL (hours)	i.e.			
			Classes, total	i.e.		Homework
				Lectures	Seminars	
	Introduction to Business Administration: Economics (Managerial Economics, Part I)					
1.1.	Basics of economic analysis	2	2	1	1	0
1.2.	Demand and supply					
1.2.1.	<i>Individual consumer demand</i>	5	4	2	2	1
1.2.2.	<i>Market demand and supply</i>	3	2	1	1	1
1.3.	Production analysis and cost analysis					
1.3.1.	<i>Production policy</i>	5	4	2	2	1
1.3.2.	<i>Theory of cost</i>	5	4	2	2	1
1.4.	Market structure analysis					
1.4.1.	<i>Perfect Competition and Monopoly</i>	2.5	2	1	1	0.5
1.4.2.	<i>Monopolistic Competition and Oligopoly</i>	2.5	2	1	1	0.5
	<i>Total</i>	25	20	11	9	5

3.2. Detailed plan of classes

Part 1. Introduction to Business Administration: Economics

Class # 1 “Basics of Economic Analysis”

Key points: Opportunity costs. Economic profits. The role of profits. The Five Forces Framework and industry profitability. Incentives. Markets. Optimization process and optimization techniques. Maximizing value of the firm. Maximizing short-term profits and maximizing long-term profits. Functional relations. Relation between totals and marginals. Relation between averages and marginals. Graphing total, marginal, and average relations. Deriving totals from marginal or average curves. Marginals as the derivatives of functions: concept of a derivative, illustration a derivative as the slope of the curve. Optimization of a function. Distinguishing maximums from minimums. Use of marginals to maximize the difference between two functions. Maximizing multivariable functions. Incremental concept in economic analysis

Chapters of textbook and list of other required readings

1. Microeconomics: Optimization, Experiments, and Behaviour. Burkett, John P. 2006., Chapter 1.
2. Microeconomics Demystified. Depken, Craig. 2005., Chapters 1, 2.
3. Baye M. Managerial Economics and Business Strategy. Chapters 1, 2.

Class # 2-3 “Individual Consumer Demand”

Key points: Utility. Nonsatisfaction principle. Indifference. Ordinal utility. Cardinal utility. Utility function. Utils. Market baskets. Marginal utility. Law of diminishing marginal utility. Basic characteristics of indifference curves. Substitutes and complements. Perfect substitutes and perfect complements. Basic characteristics of budget constraints. Effects of changing income and changing prices. Income and substitution effects. Individual demand: price-consumption curve, income-consumption curve, Engle curves. Normal goods, inferior goods. Graphing the individual demand curve. Marginal utility and consumer choice: optimal market basket. Revealed preferences. Optimal consumption: marginal rate of substitution. Utility maximization. Consumption path.

Chapters of textbook and list of other required readings

1. Microeconomics: Optimization, Experiments, and Behaviour. Burkett, John P. 2006., Chapter 10.
2. Microeconomics Demystified. Depken, Craig. 2005., Chapter 7.
3. Baye M. Managerial Economics and Business Strategy. Chapter 4.

Class # 4 “Market Demand and Supply”

Key points: Market demand curve. Change in quantity demanded. Change in demand. Demand shifters. Demand function. Linear demand function. Consumer surplus. Market supply curve. Change in quantity supplied. Change in supply. Supply shifters. Supply function. Linear supply function. Producer surplus. Market equilibrium. Price restrictions and market equilibrium: price ceilings and price floors. Changes in supply and demand: comparative statics.

Elasticity: a calculus. Own price elasticity of demand. Elastic demand. Inelastic demand. Unitary elastic demand. Perfectly elastic demand. Perfectly inelastic demand. Demand, elasticity and total revenue. Factors, affecting the own price elasticity of demand. Marginal revenue and the own price elasticity of demand. Cross-price elasticity of demand. Income elasticity of demand.

Cases:

1. Rooting Out the Causes of Defection: A Case Study
2. Just in Time for the Holidays
3. Resolving China’s Power Shortage

Chapters of textbook and list of other required readings

1. Microeconomics Demystified. Depken, Craig. 2005., Chapters 4, 5, 6.
2. Baye M. Managerial Economics and Business Strategy. Chapter 2, 3.

Class #5-6 "Production Policy"

Key points: Production function. Fixed and variable factors of production. Returns to scale and returns to a factor. Measures of productivity: total, marginal, and average product. Increasing marginal returns. Diminishing marginal returns. Negative marginal returns. Value marginal product: profit-maximizing input usage. Linear production function. Leontief production function. Cobb-Douglas production function. Algebraic measures of productivity. Isoquants. Marginal rate of technical substitution. Law of diminishing marginal rate of technical substitution. Isocost line. Changes in isocosts. Cost-minimizing input rule. Optimal input substitution.

Cases:

1. Optimized Powder Batching

Individual and group assignments

In-class individual assignment – 5 multiple choice questions (topics 1.2.1. "Individual consumer demand" and 1.2.2. "Market demand and supply")

Chapters of textbook and list of other required readings

1. Microeconomics: Optimization, Experiments, and Behaviour. Burkett, John P. 2006., Chapter 4, 5, 6.
2. Microeconomics Demystified. Depken, Craig. 2005., Chapter 8.
3. Baye M. Managerial Economics and Business Strategy. Chapter 5.
4. Diewart E., Nakamura A. Benchmarking and the measurement of best practice efficiency: an electricity generation application

Class # 7-8 "Theory of Cost"

Key points: Cost function. Fixed costs. Variable costs. Short-run cost function. Average fixed cost. Average variable cost. Marginal cost. Relations among costs: cost curves. Sunk costs. Algebraic forms of cost functions. Long-run costs. Long-run average cost curve. Economies of scale. Diseconomies of scale. Constant returns to scale.

Cases:

1. Cookenboo L. Production Functions and Cost Functions: A Case Study

Chapters of textbook and list of other required readings

1. Microeconomics: Optimization, Experiments, and Behaviour. Burkett, John P. 2006., Chapter 4, 5, 6.
2. Microeconomics Demystified. Depken, Craig. 2005., Chapter 8.
3. Baye M. Managerial Economics and Business Strategy. Chapter 5.
4. Economies of scale and scope and the economic efficiency of China's agricultural research system / Jin S. [et. al].

Class # 9 "Perfect Competition and Monopoly"

Key points: Perfectly competitive market. Firm demand curve. Marginal revenue. Profit maximization under perfect competition. Short-run operating losses. The decision to shut down. Short-run output decision under perfect competition. The firm's short-run supply curve. Long-run output decisions. Long-run competitive equilibrium. Competitive market efficiency. Deadweight loss problem. Market failure. Structural problems. Incentive problems. Role for government. Subsidy and tax policy. Tax incidence and burden. Price controls. Business profit rates. Market structure and profit rates.

Monopoly. Monopoly power. The monopolist's demand. Sources of monopoly power: economies of scale, economies of scope, cost complementarities. Elasticity of demand and monopoly's total revenues. Monopolist's marginal revenue. Costs, revenues and profits under monopoly. Monopoly output rule. Monopoly pricing rule. Profit maximization under monopoly. Multiplant output rule. Implications of entry barriers. Social costs of monopoly. Social benefits of monopoly. Monopoly regulation. Competitive strategies in monopoly markets.

Individual and group assignments

In-class individual assignment – 5 multiple choice questions (topics 1.3.1. “Production Policy” and 1.3.2. “Theory of Cost”)

Chapters of textbook and list of other required readings

1. Microeconomics: Optimization, Experiments, and Behaviour. Burkett, John P. 2006., Chapter 5, 14.
2. Microeconomics Demystified. Depken, Craig. 2005., Chapter 9, 10.
3. Baye M. Managerial Economics and Business Strategy. Chapter 8.

Class # 10 “Monopolistic Competition and Oligopoly”

Key points: Monopolistically competitive markets. Conditions for monopolistic competition. Profit maximization under monopolistic competition. Long-run equilibrium under monopolistic competition. Implications of product differentiation: comparative advertising, brand equity, niche marketing, green marketing. Optimal advertising decisions. The profit-maximizing advertising-to-sales ratio.

Oligopoly market characteristics. The role of beliefs and strategic interaction. Sweezy oligopoly: kinked demand curve. Cournot oligopoly. Cournot reaction functions. Cournot equilibrium. Isoprofit curves. Changes in marginal costs. Cartels and collusion: overt and covert agreements. Collusion in St.Petersburg gasoline market. Stackelberg oligopoly. Equilibrium outputs in Stackelberg oligopoly. Bertrand oligopoly (identical and differentiated products). Oligopoly model comparison. Contestable markets.

Cases:

1. SARFT Regulation 17 and China's Beer Market

Chapters of textbook and list of other required readings

1. Microeconomics: Optimization, Experiments, and Behaviour. Burkett, John P. 2006., Chapter 15.
2. Microeconomics Demystified. Depken, Craig. 2005., Chapter 11.
3. Baye M. Managerial Economics and Business Strategy. Chapter 8, 9.
4. Bresnahan T. Competition and collusion in American automobile industry// J. Industr. Economics. 1987.Vol. 35.P. 457-482.

Individual and group assignments

In-class individual assignment – 5 multiple choice questions (topics 1.4.1. “Perfect Competition and Monopoly” and 1.4.2. “Monopolistic Competition and Oligopoly”)

Office hours for individual consultations:

- # Ekaterina Sokolova, Wednesday, 12¹⁵, Volkhovsky per., 1-3, room 209 (according to the schedule of classes)
- # Ekaterina Sokolova, Thursday, 12¹⁵-15⁰⁰, Dekabristov per., 16, room 426

Calendar plan of current and final evaluation

<i>(In this section instructor could provide other important dates: deadlines for projects, home assignments etc/)</i>	
Mid-term exam:	
Announcement of coursework results	
Pre-exam consultation:	
Exam:	
Announcement of exam results:	
Deadlines for projects, home assignments etc.	

4. EVALUATION SYSTEM

4.1. Current evaluation

1. 15 points for 3 in-class assignment (5 points each)

4.2. Final evaluation (exam)

1. 35 points for written mid-term exam (for MITIM students) or final exam (for MIB students)

4.3. Grading system

Grading for this course will be based on two exams, homework and class participation. The weights used will be:

1. 70% - mid-term (or final) exam
2. 30% - individual in-class assignments

4.4. Sample of exam assignment

Figure in gaps shows evaluation points for each correct answer.

Part 1: Multiple choice questions (1 point each correct answer)

1. Which of the following would be an example of the firm establishing its objectives?
 - a. recognizing the potential for increased foreign competition
 - b. increasing its advertising expenditures
 - c. increasing its investment in research and development
 - d. increasing the firm's market share
 - e. none of the above
2. Which of the following is correct? The value of the firm
 - a. is best determined by the value of the firm's assets
 - b. is determined by the present value of its expected future cash flows
 - c. depends on the amount of competition the firm faces
 - d. should be based on its accounting profits instead of its economic profits
 - e. none of the above
3. If a firm's economic profit is greater than zero,
 - a. its accounting profit must be less than zero
 - b. its accounting profit must be greater than zero, but less than its economic profit
 - c. it should continue to produce only if its economic is greater than its accounting profit
 - d. it should continue to produce as long as its economic profit remains positive
 - e. none of the above
4. If the average profit from selling five units is less than the marginal profit from the fifth unit,
 - a. average profit will increase
 - b. average profit will decrease
 - c. marginal profit will increase
 - d. marginal profit will decrease
 - e. none of the above

5. If total profits are increasing,
- marginal profit must be increasing
 - marginal profit must be positive
 - marginal profit is increasing, although at a decreasing rate
 - marginal profit may be positive or negative
 - none of the above
6. Which of the following is not held constant along a given demand curve?
- time
 - the level of consumer incomes
 - the prices of related goods
 - tastes and preferences of consumers
 - none of the above
7. If marginal revenue is greater than zero,
- point-price elasticity is greater than one
 - point-price elasticity equals one
 - point-price elasticity is less than one but greater than zero
 - point-price elasticity is equal to zero
 - none of the above
8. If marginal revenue is negative,
- point-price elasticity is greater than one
 - point-price elasticity equals one
 - point-price elasticity is less than one but greater than zero
 - point-price elasticity is equal to zero
 - none of the above
9. Which of the following is not a determinant of the price elasticity demand for a good?
- the availability of related products
 - the percentage of one's income spent on that good
 - the time frame over which decisions are being made
 - the overall level of one's income
 - none of the above
10. The difference between the observed value of Y and the population regression line for a given value of X is
- the slope of the regression line
 - the intercept of the regression line
 - the error
 - there can be no difference between the observed value of Y and the population regression line
 - none of the above
11. The method of least squares calculates values for the slope and intercept that
- minimizes the sum of the squared deviations between the actual and predicted values of Y
 - minimizes the sum of the squared deviations between the actual and average values of Y
 - minimizes the sum of the squared deviations between the predicted and average values of Y
 - minimizes the sum of the squared deviations between the actual values of Y and X
 - none of the above

12. A company has estimated the following sample regression line on the relationship between the annual number of sick days taken by an employee Y and the number of years employed X :

$$Y=9.4+1.2X \quad r^2= 0.75$$

The interpretation of the coefficient of determination is

- a. 0.75 percent of the total variation in the number of years employed is explained in the sample regression
- b. 75 percent of the total variation in the number of years employed is explained in the sample regression
- c. 0.75 percent of the total variation in the number of sick days is explained in the sample regression
- d. 75 percent of the total variation in the number of sick days is explained in the sample regression
- e. none of the above

13. Which is correct?

- a. When total variable costs are rising, total fixed costs are also rising
- b. When total variable costs are rising, total costs are falling
- c. When total costs are rising, total fixed costs are constant
- d. When total variable costs are rising, total fixed costs are also falling
- e. None of the above

14. Which of the following series would represent a leading series?

- a. unemployment
- b. industrial production
- c. stock prices
- d. personal income
- e. none of the above

15. When the marginal product of a factor is decreasing, the

- a. total product may be increasing or decreasing
- b. average product is also decreasing
- c. total product is decreasing
- d. average product is greater than the marginal product
- e. none of the above

16. As the average product of a factor increases, the

- a. total product reaches its maximum value
- b. marginal product initially increases, and then decreases
- c. average product is greater than the marginal product
- d. marginal product is decreasing
- e. none of the above

17. Which of the following is correct?

- a. Along any isoquant, output is held constant
- b. Along any given isoquant, the marginal product of the inputs are equal
- c. Along any given isoquant, the marginal rate of technical substitution is held constant
- d. Along any given isoquant, the marginal products of the inputs are held constant
- e. none of the above

18. Consider the following generic production function where output is a function of capital and labor:

$$Q=f(K,L)$$

Output elasticity is measured as

- a. the increase in capital and labor resulting from a one percent increase in output
- b. the increase in output resulting from a one percent increase in either capital or labor
- c. the percent change in output resulting from a one percent increase in both capital and labor
- d. the increase in output resulting from a one percent increase in both capital and labor
- e. the percent change in output resulting from a one percent increase in either capital or labor

19. A movement down and to the right on a production isoquant would indicate

- a. an increase in output
- b. a different production technique
- c. an improvement in technology
- d. a worsening in technology
- e. none of the above

20. Basic research refers to activities that are

- a. aimed purely at the creation of new knowledge
- b. expected to have a practical payoff
- c. aimed at the reduction of research findings to practice
- d. based on simplistic techniques of analysis
- e. none of the above

Part 2: Analytical problems

1. What are the main differences between oligopoly and monopolistic competition (name and explain them)? How can we determine whether the market is oligopolistic or monopolistically competitive? Can you name the characteristics of goods (or services), which are typically produced at each market structure? (5 points)
2. Using production function and cost theory, explain the importance of increasing of the firm's outputs, innovations and diversification. (10 points)

5. LITERATURE

5.1. Required reading

5.1.1. Required textbook

Microeconomics: Optimization, Experiments, and Behaviour. Burkett, John P. 2006. Oxford Univ. Press., Source: <http://site.ebrary.com/>

Microeconomics Demystified. Depken, Craig. 2005. The McGraw-Hill Companies., Source: <http://site.ebrary.com/>

5.1.2. Other required reading

Additional source that covers the economic fundamentals:

Baye M. Managerial Economics and Business Strategy [Text] / M. Baye. – McGraw-Hill, 2006. – 620 p.

The required textbook provides students with the tools from intermediate microeconomics, game theory, and industrial organization that they need to make managerial decisions. Mostly all topics covered by the course are presented in this textbook.

Hirschey M. Economics for managers [Text] / M. Hirschey. – Mason, OH : Thomson/South-Western, 2006. – XX, 745 p.

The book takes a practical problem-solving approach. The focus is on economics of decision making process. The emphasis is on economic intuition, but quantitative tools are used too.

Salvatore, D. Microeconomic theory and applications [Text] / D. Salvatore. – 4th ed. – New York: Oxford University Press, 2003. – 724 p.

Text on microeconomics at the senior or beginning graduate level. Includes a lot of appropriate applications.

Mansfield E. Managerial Economics [Text] / E. Mansfeld. – W.W.Norton&Company, 1990. – 557 p.

Articles:

Baumol W. What Can Economic Theory Contribute to Managerial Economics? / W. J. Baumol // Moyer C., McGuigan, G. Trivoli, Managerial Economics: Readings, Cases, and Exercises. – West Publishing Company. – 1979. – P. 3-7.

The article discusses the difference between managerial economics and economic theory in terms of methodology.

Bresnahan T. Competition and collusion in American automobile industry / T. Bresnahan // Journal of Industrial Economics. – 1987. – Vol. 35. – P. 457-482. Source: <http://jstor.org/>

Movements in total quantity and in quality-adjusted price suggest a supply-side shock in the American automobile market in 1955. The paper tests the hypothesis that the shock was a transitory change in industry conduct, a price war. The key ingredients of the test are equilibrium models of oligopoly under product differentiation.

Chevalier J., Kashyap A., Rossi P. Why don't prices rise during periods of peak demand? Evidence from scanner data The American Economic Review, Vol.93, No.1. (Mar., 2003) pp.15-37. Source: <http://jstor.org/>

Retail and wholesale prices for a large supermarket chain over seven and one-half years are examined. Authors find that prices fall on average during seasonal demand peaks for a product, largely due to changes in retail margins. Manufacturer behavior plays a limited role

in the countercyclicality of prices.

Diewart E., Nakamura A. Benchmarking and the measurement of best practice efficiency: an electricity generation application [Электронный ресурс] / E. Diewart, A. Nakamura // The Canadian Journal of Economics / Revue canadienne d'Economie, Vol. 32, No. 2, Special Issue on Service Sector Productivity and the Productivity Paradox. (Apr., 1999), pp. 570-588. Source: <http://jstor.org/>

An application of production efficiency analysis for reducing electricity generation costs is discussed. The best practice efficiency measurement is used to provide an integrative framework for utilizing nonfinancial input-output efficiency measures together with unit cost financial information. The best practice efficiency approach is demonstrated in the context of an empirical study of the efficiency of electric power generating plants.

Economies of scale and scope and the economic efficiency of China's agricultural research system / Jin S. [et. al] // International Economic Review. – Vol. 46, No. 3. – August 2005. – P. 1033-1057. Source: <http://web.ebscohost.com/>

The article investigates economies of scale and scope and other potential sources of improvements in the economic efficiency of China's crop breeding. Using data covering 46 wheat and maize-breeding institutes from 1981 to 2000, cost functions for the production of new varieties at China's wheat- and maize-breeding institutes are estimated. The results indicate strong economies of scale, along with small to moderate economies of scope related to the joint production of new wheat and maize varieties.

Lewellen W., Huntsman B. Managerial Pay and Corporate Performance/ W. J. Baumol // Source: Moyer C., McGuigan, G. Trivoli, Managerial Economics: Readings, Cases, and Exercises. – West Publishing Company. – 1979. – P. 8-16.

The article discusses establishment of the goals and objectives of the organization. A multivariate analysis is held to answer the question whether a corporation's profitability or its sales revenue has the stronger influence on the rewards of its senior officers.

Baker J. The Case for Antitrust Enforcement. The Journal of Economic Perspectives, Vol. 17, No. 4. (Autumn, 2003), pp. 27-50. Source: <http://jstor.org/>

The article provides evidence of the necessity and success of antitrust enforcement. It gives the examples of socially beneficial antitrust challenges by the US federal state agencies to price fixing and other forms of collusion; to mergers that appear likely to harm competition; and to monopolists that use anticompetitive exclusionary practices to obtain or maintain their market power.

Shapiro C. Antitrust limits to Patent Settlements. The RAND Journal of Economics, Vol. 34, No. 2. (Summer, 2003), pp. 391-411. Source: <http://jstor.org/>

Author proposes a specific antitrust rule limiting patent settlements: a settlement must leave consumers at least as well off as they would have been from ongoing patent litigation. After establishing that profitable settlements satisfying this constraint generally exist, author shows how this antitrust rule can be used to evaluate three types of settlements: mergers, patent pools, and negotiated entry dates.