# **American University of Central Asia**

# **Industrial Organization (ECO-426)**

**Spring - 2014** 

Lecturer - *Liudmila Konstants*, *Ph.D*Associate Professor of the Department of Economics

#### Contact information:

Office Location: 204/1 Office Phone: 663-501 E-mail: knst@mail.auca.kg

Office Hours: to be announced and by appointments

**Course Objectives:** Any theory is dead without its application. Therefore my main objective is to teach this course of Microeconomics through an artful blend of theory and application. "Why should one be interested in studying this part of Micro<sup>1</sup>? This question sounds almost silly. To study industrial organization is to study the functioning of markets, a central concept in microeconomics." The main objective of the course is to teach you applying microeconomic theory in business-reality.

**Course Description:** You will get know what does a word "market" mean and how to define it size, how to calculate your next steps in business – whether this is use to negotiate with an/other firm(s) or not, will your rival(s)/partner(s) stick to your common agreements or not, what kind of relationships could be better for your business – cooperation or integration, is it use to merge or no... And, of course we will analyze what the great mean of price policy is the policy of price discrimination!

**Prerequisite:** The main prerequisite of this course is an "Intermediate Microeconomics" and "Math for Economists and Businessmen". A "Game Theory" course could be just a plus. The reason for this will become clearer as the course progresses.

#### Course Materials:

- 1. <u>Industrial Organization: Contemporary Theory and Practice</u> by Pepall L, Daniel J. Richards and G. Norman//South-Western College Publishing
- 2. Microeconomics by Robert S.Pindyck and Daniel L. Rubenfeld//Third Ed. Prentice Hall, 2007

## we ek	Topics	# of Sour- ces	Chap- ters pages
	1. Introduction and a review of perfect competition a. strategic behavior within the firm		
	b. strategic interaction and markets		
	c. economic models and testing of economic hypotheses		

<sup>&</sup>lt;sup>1</sup> Our course will be founded on the most practical part of Micro theory - Industrial Organization

<sup>&</sup>lt;sup>2</sup> (This words belong to famous economists, classic of IO - Tirole)

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	d. market efficiency			
	e. brief review of consumer demand and the linear inverse demand			
	function			
	f. characteristics of perfect competition			
	g. optimal choice of output and the MR = MC rule			
	h. individual and market supply			
	i. market equilibrium and the zero profit condition			
	2. Review of monopoly and an introduction to discounting			
	a. monopoly (market) power and downward sloping demand			
	b. marginal revenue for a monopolist			
	c. equilibrium and positive economic profit			
	d. opportunity cost of financial capital			
	e. present value analysis and discounting			
	f. the interest r and the discount rate $R = 1/r$			
	g. discounting for multiple time periods			
	h. discounting for infinite time periods			
	i. comparison of alternative cost and return streams			
	1. Comparison of afternative cost and return streams			
	2. Economic symples and companies a of competition and monorch			
	3. Economic surplus and comparison of competition and monopoly			
	a concents of economic cumlus			
	a. concepts of economic surplus			
	b. consumer, producer, and total surplus with competition			
	c. computing quasi-rent (producer surplus) for the monopoly firm			
	d. efficiency comparisons of competition and monopoly using surplus			
	concepts			
	e. non-surplus approach to economic efficiency			
	f. examples using discounting and surplus concepts		~ .	
1.	Production Technology and Market Structure	1	Ch.2	
	2.1. Market Structure and Conversation:			
	2.1.1. Measuring Market Structure			
	2.1.2. Measurement Problems: What Is a Market?			
	2.1.3. Upstream and Downstream Firms, Vertical relationships, and			
	Industry Classification			
	2.2. Production Technology and Costs			
	2.2.1. The Neoclassical or Technological View of the Firm			
	2.2.2. The Single-Product Firm			
	* * *			
	2.2.3. Sources of Scale Economies			
	2.2.4. Scale Economies – Fixed Costs and Sunk Costs			
2.		1	Ch. 2	
	2.3. Multiproduct Technology: Economies of Scale and Scope			
	2.3.1. Flexible Manufacturing: Scope Economies and Product			
	Differentiation			
	2.3.2. Empirical Evidence on Multiproduct Cost Functions			
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3.	2.4. Non-cost Determinants of Industry Structure			
	2.4.1. The size of Market			
	2.4.2. The Role of Government Policy			
	BASIC MONOPOLY PRICING AND			
	PRODUCT STRATEGIES			
	3.1. The Single-Product Monopolist			
	3.2. Strategies and Degrees of Price Discrimination			
	3.2.1. First-Degree Price Discrimination:			
		3	Ch.3	
	1. The basic monopoly model and first degree price discrimination			
	a. Monopoly pricing MR = MC			
	b. uniform versus non-uniform pricing			
	c. perfect price discrimination and the appropriation of surplus			
	d. types of price discrimination and conditions to implement them			
	e. first degree price discrimination			
	f. two-part tariffs and block pricing			
	g. graphical and numerical examples			
4.	2. Second and third degree price discrimination			
	a. idea and prevalence of volume discounts			
	b. capturing some consumer surplus when perfect discrimination is not			
	possible			
	c. second degree price discrimination			
	d. incentive compatible pricing schemes			
	e. numerical examples			
	f. third degree price discrimination (examples and models)			
	g. graphical and algebraic examples			
<b>5.</b>				
	3. Social welfare and public policy, product quality, and the multi-plant			
	monopoly			
	a. price discrimination and welfare			
	b. public policy towards price discrimination			
	c. product quality and monopoly			
	d. multi-plant monopoly			
6,	Ch.4 Product and Pricing Strategies For The Multiproduct		Ch. 4	
7,	Monopolist			
8.	W. 1.6			
	Week 6:			
	1. Introduction, product variety, price discrimination & spatial models			
	a.introduction to multiproduct firms			
	b. product homogeneity and product variety			
	c.net prices, screening and consumer identification			
	d. vertical versus horizontal price differentiation			
	e.spatial model of price differentiation (Hotelling)			
	f. monopoly pricing in the spatial model without price discrimination			
	industry prioring in the spatial model without prior discrimination			
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	Week 7:		
	2. The spatial approach of product variety and product tie-ins		
	a. issues of product variety in the spatial model		
	b. monopoly pricing in the spatial model with price discrimination		
	c. product tie-ins and commodity bundling		
	d. commodity bundling as a way to price discrimination		
	an extraction of the state of t		
	W. 1 0		
	Week 8:		
	3. Continuation of Product Tie-Ins, Price Discrimination and Policy		
	a. required tie-in sales with variable proportions		
	b. complementary goods and network externalities		
	c. antitrust policy, bundling, and tie-in sales		
	8, man and an and an and an and an		
0	M: 1 4 m = 1. M: 1 m = 1. 1. 20nd @ 14.00 17.00 1 1 11.402		
9.	Mid-term week: Midterm Exam: March, 22 <sup>nd</sup> @ 14:00 – 17:00 Aud.# 403		
10,	Collusion and Cartels.	1	Ch. 7
11,	Conusion and Carters.	1	CII. /
12.	1. Introduction and incentives for a cartel		
12.			
	a. Introduction		
	b. Reasons for cartels and why they may fail		
	c. Comparison of competitive, monopoly and N-firm oligopoly models		
	d. Incentives to cheat on a cartel		
	e. Introduction to repeated games		
	2. Repeated games, cartels and oligopoly models		
	a. repeated games and associated strategies		
	b. discounting in repeated games		
	c. simple two-period repeated games		
	d. simple repeated games with a finite horizon		
	i) unique equilibrium		
	ii) multiple equilibria		
	3. More on repeated games, facilitating collusion, detecting collusion and		
	policy		
	a. Repeated games with an infinite horizon and discounting formulas		
	b. factors that encourage formation and maintenance of cartels		
	c. detecting collusion and policy		
13,	Vertical Relation and Restraints	1	Ch. 9
14,			-
15.	1. Introduction, vertical restraints, and retail price maintenance		
	a. examples of vertical restraints		
	b. brand and retail (intra-brand) competition		
	c. review of double marginalization and integration as a solution		
	d. royalties as a solution to double marginalization		
	· · · · · · · · · · · · · · · · · · ·		
	e. moral hazard when costs are not known		
	f. two-part tariffs as a response to double marginalization		
	g. resale price maintenance (maximum price) as a response to double		
	marginalization 9-3		

2. Vertical restraints and the level of service	
a. importance of service to the level of retail sales	
b. simple model where sales depend on price and level of service (0-1	
value)	
i) integrated firm	
ii) monopoly manufacturer and retailer	
iii) competitive retailing	
c. free riding	
organization  a. resale price maintenance and variable demand b. empirical evidence on resale price maintenance c. exclusive territories and exclusive selling	
d. exclusive dealing	
e. franchising and divisionalization	
f. a note on principal-agent models and the theory of the firm	
g. scope economies and firm organization	
Test #2: May, 3 <sup>rd</sup> 10:00 – 13:00	
For those students who take Economics of the Firm:	
you'll have exam on Economics of the Firm @ 14:00–17:00	

I reserve the right to modify any and all portions of this syllabus at any time during the period of the course. I'll let you know this on e-course – keep your attention on e-course info.

**Grading Scale:** Your final letter grade for the course will be based on the following scale - expressed as a percentage.

**Notes:** (1.) there is no score requirement for each test (like 2 test \* 50% each or 4 test \* 25%). I'll calculate your percentage according to 'earned' points (comparing with maximum possibility to 'earn').

```
You get:
             if you earn:
                                You get:
                                             if you earn:
   "F"
            up to 40.0
                                    "B-"
                                             (67.0 - 70.0)
                                   "B"
   "D -" - (41.0 - 44.5)
                                          -(70.5-75.0)
                                   "C-"
          -(45.0-49.5)
                                           - (50.0 - 54.5)
                                   "C"
   "B+" -
            (75.5 - 80.0)
                                              (55.0 - 59.5)
          - (80.5 - 85.0)
                                              (60.0 - 66.5)
          - (85.5 and above)
```

Moreover, you can be provided with a possibility to "earn" additional points for exceptionally good presentations of a "fresh" (of this or last year) relevant to the studied theory case study: This option will be left to your discretion. You'll be able to get 100% grade without these bonus points.

#### **Grading Guidelines for Presentations**

**'A'** = **5 points**: Students presented important points with good collection of "fresh" scientific literature and data in a thorough manner; made extensive eye contact with the audience;

did not read the presentation;

kept to the 6-9 minute time limit.

The speech is natural and continuous with few or no unnatural pauses.

## **'B' = 4points**: Students presented some important points with good collection of "fresh" scientific

literature and data but could have been more thorough;

made limited eye contact with the audience;

did not read the presentation;

kept within one minute of the 6-9 minute time limit;

Slight stumbling [спотыкание; запинка; задержка] but manages to rephrase or continue.

### **'C'= 3 points**: Lacking in important points and/or details;

Limited collection of literature or/and data (or they not pretty "fresh";

made little eye contact with the audience;

read the presentation often;

diverged from the 6-9 minute time limit by 2-3 minutes.

The speech frequently hesitant, sentences may be left uncompleted.

### **'D'** = **2 points**: Severely lacking in important points and/or details;

Limited collection of literature and data (or they not pretty "fresh";

failed to make eye contact;

read the presentation;

diverged from the time limit by more than three minutes;

The speech is very slow and uneven, except for short or routine sentences.

#### F' = 0 points: Assignments where none of the above applies.

## **Attendance and Participation**

By registering for this course, students have made a commitment to participate in the course classes as well as other course related activities. To relieve credits for class participation a student should be prepared and should actively participate in all class meetings. Participation includes much more than being able to answer questions: students are expected to be engaged in and support class discussions about other students' topics and papers. To utilize the class\_environment your timely presents and participation are necessary. Keep in mind: late arrivals are disruptive and inconsiderable to the rest of the class.

After three unexcused absences your grade will be dropped one letter grade.

Three late arrivals (10-15 minutes) will be count as one absence.

Please, NOTE: (1) Students who are not paying attention in a class will be counted as absent.

## MISSING THE TEST MEANS "0" POINTS. NO MAKE-UP WILL BE PROVIDED - IN NO WAY

In case of a serious illness the University provides a grade "I".

[A student is allowed a maximum of one unexcused absence. A student who misses 25% of the course meeting (3 - 3.5 weeks - without proved sound documentation) will get a grade "F". For missing such amount of classes due to serious reason with proved official documentation (sufficiency of that documentation will be determined by the instructor(s)) a student *can be* dropped with grade "I".]

#### **Professional Conduct and Attitude**

As a critical part of your education, we encourage you to continue strengthening the community that you've build with your classmates and teacher, which is based on relationships of mutual trust and respect. The way that you choose to conduct yourself will be considered an integral part of your professional development and will therefore affect the feedback and grades you receive. Please, approach me if you have ANY concerns, problems or questions connected to the course issues. The minutes immediately after regular class hours are often the best opportunities to see me for any special help you may need. You may also contact me for a meeting outside of scheduled class hours. I don't mind putting in the extra time, and I expect that you won't either, as long as it doesn't conflict with anyone's other scheduled courses or meetings. Keep-in-mind: before the consultation, please, read the Chapter carefully and try to find a solution for issues under the questions. Firstly you will be asked, "What is written in a chapter about the issue?" and asked to show the ways you used for solutions. I look forward to working with you this semester!

<u>APPEAL</u>: any student is encouraged to have a look at his/her written test after the grading. You are encouraged to see your strong parts of explanations or your mistakes; you can calculate whether all the points are counted by the professor. Nevertheless, if you find "mistakes(s)" from the professor's side you should prepare your written appeal: you should re-write the task, to explore the best answer from the studied source(s), to refer on it (title, chapter, and page); and to point-out that your answer was exactly the same. After getting your Appeal I will re-check the entire test (not just that point). It could be that you'll get a new score which could be higher or lower of the initial.

A calculating test is counted as "Done" if you get a right result (showing all the essential steps of a calculus).

<u>CHEATING.</u> If within the test time I see that you use a not-authorized source (paper, cell-phone, etc.) I'll write on your test blank, "Cheating". You'll leave a test auditorium right immediately without any arguing. You'll get "0" and I leave the right to issue an Appeal case against you.

### **Course Requirements**

- Students are expected to read the assigned materials before they are covered in classes. This practice will increase the learning process so significantly that you will be surprised.
- Assignments and papers must be turned in by the due date unless prior arrangements are made with the instructor(s). **No late assignments will be accepted!**
- It is recommended that students collaborated and work together. However, cheating or academic dishonesty at any form will not be tolerated.
- All students are expected to adhere to the AUCA Honor Code and other general rules of the university etiquette.

*NOTE:* Your cell-phone MUST be turned-off within a class – so the more – within the tests!

YOU MAY NOT USE A CELL-PHONE INSTEAD OF A CALCULATOR WITHIN THE TESTS!