

INTERMEDIATE MICROECONOMICS (ECON 3070-003)  
Department of Economics, University of Colorado  
Fall, 2005

M,W,F: 1:00-1:50 pm,  
Professor: Charles de Bartolome  
Office hours: M 9:15-10:15 am, Tu 10-11 am,  
                  Thurs 1:30 - 2:30 pm  
Office: Econ 203.  
e-mail: debartol@spot.colorado.edu

Room: ECON 117  
Recitation instructor:  
Recitation place:  
Recitation time:  
Office hours:  
Office:

*Textbook:* Andrew Schotter, (2001), *Microeconomics: A Modern Approach* (3rd Edition).  
Addison Wesley Longman.

*Course description:* The course's primary goal is to prepare students with the basic tools used in the 4000-level courses. It presents the material by considering the different stages of economic development. The decisions by households of how hard to work, which goods to buy and how much to save are presented in an undeveloped economy of barter. A firm is then posited to discover a production process and to become a monopoly: its pricing decisions are discussed. The monopoly's profits induce entry and the industry becomes an oligopoly. The interaction between the firms is used as a tool to present game theory. As more firms enter, the industry becomes competitive. The welfare consequence of the different industry structures are discussed.

*Course Level:* The course builds on the material presented in the Introduction to Economics (ECON 1000) or the Principles of Microeconomics (ECON 2010), covering the material at a more advanced level. The basic relationships are developed graphically and using calculus.

*Course Prerequisites:*

EITHER ECON 1000 (Introduction to Economics) OR Econ 2010 (Principles of Microeconomics);

AND

EITHER ECON 1078 and 1088, OR MATH 1300, OR MATH 1310, OR MATH 1081, OR MATH 1080, 1090 and 1100, OR APPM 1350.

*Course assignments and WebCT:* all course assignments, problem sets and some lecture notes are posted on the course WebCT page located at: <http://webct.colorado.edu> .

In the past, some students have had difficulty in downloading some of the pdf files posted on WebCT . ITS advises that this is due to the large file sizes. ITS recommends that you open the Adobe Acrobat Reader. Then click as: Edit > Preferences> General > Options and *uncheck* "Allow Fast Web View".

Please note that six pages of each Adobe Acrobat file can be printed on a single sheet by clicking as: Print >Properties > layout > Pages per sheet.

*Grading:* There are two midterms, a final exam, and one data collection exercise. The grade of the student (before any adjustment for non-attendance) will be determined as: 33% First Midterm, 33% Second Midterm and 34% Final.

The data collection exercise is Pass/Fail. If an attempt at the data collection exercise is not handed in by the date due, your course score will be lowered 1% . If the exercise is not passed by the day of the exam, *you will be graded Fail*. If you subsequently pass the exercise within 6 months after the final, your grade will be changed to the grade earned in the midterms and the final. If you do not pass the exercise within 6 months after the final, your grade will remain permanently as Fail.

*Attendance at class:* Yogi Berra once remarked: "90% of life is just turning up". The best way to learn the material is to attend class. Reading the lecture notes posted on the web is not a good substitute for attendance. Attendance at class is therefore required.

Non-attendance at class will be reflected in your grade. Your final score - calculated as explained above under "Grading" - is out of 100 points. For each absence from class after your third absence, your score will be reduced by .5 point. For example, your score from the exams is 76 (out of 100) and in total you missed 6 classes. Your final score which I will use to calculate your grade is  $76 - 3(.5) = 74.5$ .

*Administrative Drop:* Because attendance is important and is expected, I will drop from the class any student who neither attends the first three classes of the term nor gets special permission from me for his/her absence.

*Problem Sets:* Problem sets with answers will be posted for each topic. The problem sets are an integral part of the course. They are designed to help you master the material, and the exam will loosely follow the format of the problem sets.

*Difference with other sections:* I expect this section to go slower, cover fewer topics and put more emphasis on analysis than other sections.

Exams: The two midterms will be given in the evening as:

FIRST MIDTERM: Tuesday, 27 Sept 7:00 - 9:00 p.m.  
in CHEM 140

SECOND MIDTERM: Tuesday, 1 November 7:00 - 9:00 p.m.  
in CHEM 140

The final exam will be held as:

FINAL: Friday, 9 December 7:30 - 10:00 a.m.  
in ECON 117

You must bring a blue-book to each exam.

Because this is an intermediate class, the exams will not just repeat material covered in class. Some questions will closely follow the material covered in class and in the problem sets, but some will ask you to apply the material in a different environment.

*Failure to be present at an exam:* If you fail to be present at an exam (unless you are ill and have a medical note from your doctor, or unless before the exam I have granted you permission to miss the exam), you will earn a score of 0 in the exam.

*Students with Special Needs:* If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services (DS) in a timely manner so that your needs may be addressed. DS determines accommodations based on documented disabilities (303-492-8671, Willard 322 or [www.colorado.edu/sacs/disabilityservices](http://www.colorado.edu/sacs/disabilityservices)).

*Sexual Harassment Policy:* The University of Colorado Policy on Sexual Harassment applies to all students, staff and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or offensive. Harassment may occur between members of the same or opposite gender and between any combination of members in the campus community: students, faculty, staff, and administrators. Harassment can occur anywhere on campus, including the classroom, the workplace, or a residence hall. Any student, staff or faculty member who believes s/he has been sexually harassed should contact the Office of Sexual Harassment (OSH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the OSH and the campus resources available to assist individuals who believe they have been sexually harassed can be obtained at: <http://www.colorado.edu/sexualharassment/>

*Religious Observances:* Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please let me know in a timely manner if one of the exam dates falls on a religious holiday you intend to observe and I will arrange for you to take a make-up. See policy details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

*Classroom Behavior:* Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which students express opinions. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at [http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code)

*Academic Integrity:* All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). In particular: papers submitted by any student, written in part or in whole by someone other than that student, shall be considered to constitute fraud under the University Honor Code, and result in the assignment of an “F” for the entire course. Additional information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>

*Course outline:* shown overleaf is a list of topics to be covered and likely dates.

<i>Date</i>	<i>Topic</i>	<i>Chapter</i>
22, 24 Aug	INTRODUCTION Ten Big Ideas Normative and positive economics. Property Rights: the problem of the commons	1
26,29,31 Aug	CONSUMER PREFERENCES Sets Utility - diminishing marginal utility Indifference curves New welfare economics Marginal Rate of Substitution Convexity	2 <i>omit:</i> Sec 2.2 pp. 28.5-29.5 ("Continuity Assumption")
2 Sept	EXCHANGE Feasible trades: Edgeworth Box Gains from trade	4
5 Sept	No class (Labor Day)	
7 Sept	EXCHANGE (cont) Pareto-Efficiency - "equal marginal rate of substitution" rule - contract curve Competitive behavior Competitive equilibrium	4 <i>omit:</i> pp 139.5-144 Appendix A.
9,12,14 Sept	MATHEMATICS OF OPTIMIZATION Lagrangean Function	pp. 121-122
16,19,21 Sept	CONSUMER DEMAND Individual consumer choice Income expansion path - normal and inferior goods. Demand curves Income and substitution effects - normality and downward-sloping demand curves Market demand Consumer surplus	3 <i>omit:</i> Sec 3.12, 3.15, pp. 103.5-104 Sec 3.18, pp. 115- 116.5, pp. 118 Sec 3.21 Appendix B Appendix C

23, 26 Sept	<b>PRODUCTION</b> Production process and technology Production function - diminishing marginal returns - marginal product Isoquants Marginal rate of technical substitution	5
27 Sept	FIRST MIDTERM (7:00 - 9:00 pm in CHEM 140)	
28 Sept	No class	
30 Sept, 3 Oct	<b>PRODUCTION (cont)</b> Returns to scale Short-run and long-run production functions.	5
5, 7,10,12 Oct	<b>COST FUNCTIONS</b> Cost functions Isocost curves Minimizing the cost of production - “marginal rate of technical substitution = factor price ratio” rule Input substitution Short-run and long-run Marginal cost functions Average cost functions.	6
14 Oct	No class (Fall Break)	
17,19,21 Oct	<b>STRATEGIC ANALYSIS</b> Extensive form Information sets Strategy Normal form Nash Equilibrium Credible Threats Subgame Perfect Equilibrium Backward Induction	7 <i>omit:</i> pp. 242-260, Sec 7.5 Appendix A Appendix B
24,26,28 Oct	<b>MONOPOLY</b> Marginal revenue curve Maximizing profit - “marginal revenue = marginal cost” rule Social inefficiency: deadweight loss Socially optimal single price	9 <i>omit:</i> Sec 9.4 Appendix B

31 Oct	REGULATION Natural Monopoly Sustainable Monopoly Average Cost Pricing	10 <i>omit:</i> pp384-386 Sec 10.3 Sec 10.4 Appendix A Appendix B	
1 Nov	SECOND MIDTERM (7:00 - 9:00 pm in CHEM 140)		
2 Nov	No class		
4 Nov	REGULATION (cont)		
7,9,11 Nov	OLIGOPOLY Cournot Quantity Model Welfare properties of duopolistic markets	11 <i>omit:</i> Sec 11.3 Sec 11.5 Sec 11.6 Sec 11.7 Sec 11.8 p. 442 Appendix B	
14, 16 Nov	MARKET ENTRY Perfect competition as a sequence of successful entries	Sec 12.5	
18,21,23	PERFECTLY-COMPETITIVE MARKETS Short-run supply of individual firm Equilibrium	13 (pp. 483-511)	
25 Nov	No class (Thanksgiving Break)		
28 Nov	PERFECTLY-COMPETITIVE MARKETS (cont) Long-run equilibrium Dynamic changes Why are long-run competitive equilibria so good?	13 (pp. 518-533)	
30 Nov,2 Dec	FACTOR MARKETS Labor Market Capital Market <i>If time permits:</i> Motivating labor (Sec 8.1, 8.2, 8.3)	19 <i>omit:</i> Sec 19.6 Sec 19.7	
5,7 Dec	EVALUATING PERFECTLY-COMPETITIVE OUTCOMES First Fundamental Welfare Theorem Second Fundamental Welfare Theorem		15
9 Dec	FINAL EXAM (7:30-10:00 am in ECON 117)		