

INTERMEDIATE MICROECONOMIC THEORY (ECON 3070-010)  
Department of Economics, University of Colorado  
Fall, 2016

Class time:	M,W,F: 10 - 10:50 am	Room:	GUGG 205
Professor:	Charles de Bartolome	Recitation instructor:	Daniel Diebel
Office hours:	M 1:50 - 2:50 pm; Tu 10:15-11:15am F 1:50 - 2:50 pm.	Recitation time:	
Office:	Econ 203.	Recitation place:	
e-mail:	Charles.Debartolome@colorado.edu	Recitation office hours:	
		Office:	

*Textbook:* Austan Goolsbee, Steven Levitt and Chad Syverson, (2016), *Microeconomics* (2<sup>nd</sup> Edition) WITH LAUNCHPAD ACCESS. Worth Publishers.

Buying textbooks is expensive. I do not recommend that you buy the textbook and LaunchPad access separately. It is almost-always much cheaper to buy a bundle of the textbook plus Launchpad access. I have negotiated with Worth Publishers and the bundle is available at the bookstore for \$150 (approx).

I am not yet sure whether you will be able to access LaunchPad using Desire2Learn. This is my preferred option but it may not be feasible. Therefore, once you have bought LaunchPad access, do not enter any registration code etc into your computer until I have announced whether you are to register through Desire2Learn.

*LaunchPad:* Each student must enroll in LaunchPad. In addition to providing additional learning materials, there are weekly quizzes on LaunchPad which will be graded. Each quiz is due by 10am on Monday.

The first LaunchPad quiz is for practice only and is due at 10am on Monday 29 Aug. The first Launchpad quiz which is graded is due at 10am on Monday 5 Sept (actually, due to Labor Day, at 10am on Tuesday 6 Sept).

*“Clickers”* Each student must buy a *i>clicker*. If you do not already own one, an *i>clicker* may be purchased at the University of Colorado bookstore. Clickers will be used to promote faculty-student interaction. They will also be used to give class problems which will be scored.

Clickers must be registered at: <https://myCUinfo.colorado.edu> .  
Register using your Identity Login (*not* your student ID).

*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. 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 Principles of Microeconomics (ECON 2010), covering the material at a more advanced level. The basic relationships are developed graphically and using calculus.

*Pre-requisites:*

ECON 2010 (Principles of Microeconomics);


*AND*

EITHER ECON 1088 OR MATH 1081 OR MATH 1300 OR MATH 1310 OR APPM 1350 (all min grade C-).

Students must have at least 22 credit hours completed

*Course assignments and Desire2Learn webpage:*

All course assignments and most lecture notes are posted on the Desire2learn course webpage located at: <https://learn.colorado.edu>

Please note that six pages of each Adobe Acrobat file can be printed on a single sheet by clicking as: download >  > download > show in folder > print > multiple > 3 x 2, landscape

*Attendance at class:*

Woody Allen once remarked: "90% of success 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.

*Recitations:* Recitations start w/c 29 Aug.

The recitations are an integral part of the course and therefore attendance at recitation is required. Recitations will go over the weekly problem set.

The weekly problem set is posted on the Desire2Learn webpage. Before the recitation, you must attempt to work through the weekly problem set. The recitation reviews the problem set.

The weekly problem set is designed to present problems at a deeper level than the LaunchPad quizzes. The format of the exams will be closer to the format of the weekly problem set than to the LaunchPad quizzes.

*Grading:* There are two midterm exams, a final exam, in-class clicker questions, a weekly graded quiz on LaunchPad, and recitations. The grade of the student will be determined as:

22%	First Midterm,
26%	Second Midterm,
27%	Final
8%	In-class clicker questions
8%	LaunchPad quizzes
9%	Recitations

*Concerning in-class clicker questions.* I use clicker questions to reinforce the main point of a lecture. A correct answer receives 1 point and an absence or an incorrect answer receives zero points.

In calculating your total score for all in-class clicker questions, I will sum your scores for all days, omitting your three lowest daily scores.

*Concerning recitations:* At the recitation, you are required to hand in an answer to the Problem Set which show evidence of effort (your answer need not be correct). If you are present and if your answer shows evidence of effort, you will receive a score of 1 for that week. If you are not present at the recitation and do not hand in an answer, you will receive a score of zero for that week. Your recitation leader will determine how you will be treated if (1) you are present but the answer which you hand in shows no evidence of effort or if (2) you are not present but submit in advance to your recitation leader an answer showing evidence of effort. You may not ask somebody else to hand in an answer on your behalf.

In calculating your total score for recitations, I will omit your two lowest weekly scores.

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

FIRST MIDTERM: Monday 19 Sept, 7 - 9pm. Location: TBA

SECOND MIDTERM: Monday 31 Oct, 7 - 9pm. Location: TBA

The final exam will be held as:

FINAL: Sunday 11 Dec, 7:30 - 10 pm in RAMY C250

You must bring three blue-books to each exam.

*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 take a make-up exam), you will earn a score of 0 in the exam.

*Classroom courtesy:*

Please turn your cell 'phone off prior to the start of class.

I believe that learning is enhanced if there is full concentration by both the instructor and the student. Therefore, usage of laptop computers in class is restricted to following the course notes. To facilitate this, laptops may only be used in the front two rows of the classroom.

*Drop-in Tutorial Lab:*

The Department of Economics provides a free drop-in tutorial lab for undergraduates enrolled in Economics 3070 and other courses.

Information about the lab is available at:

[www.colorado.edu/economics](http://www.colorado.edu/economics) > undergraduate > drop-in tutorial lab

*Tutors:*

The Department of Economics keeps a list of tutors. Please contact the department's Main Office if you would like to review the list. The Main Office is in Room 212 in the Economics Building.

*Using Clickers:*

I consider it cheating if a student uses another student's clicker.

You get a green light when your answer is registered. If you get a red light, your clicker is not registering and your score is automatically zero.

*Accommodations for students with special needs:*

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671; Center for Community Building, Room N200; or <http://disabilityservices.colorado.edu>

If you have a temporary medical condition or injury, please see the guidelines at: <http://disabilityservices.colorado.edu>

Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations.

*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 such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at <http://www.colorado.edu/policies/student-classroom-and-course-related-behavior> And at: <http://www.colorado.edu/studentaffairs/studentconduct/index.html>

*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](mailto:honor@colorado.edu) ; 303-735-

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). Other information on the Honor Code can be found at:

<http://www.colorado.edu/policies/honor.html> and at

<http://honorcode.colorado.edu>

*Discrimination and Harassment Policy:*

The University of Colorado at Boulder is committed to maintaining a positive learning, working, and living environment. The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended 11/08/2001). CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, or veteran status. Individuals who believe they have been discriminated against should contact the Office of Discrimination and Harassment (ODH) at (303) 492-2127 or the Office of Student Conduct (OSC) at (303) 492-5550. Information about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://hr.colorado.edu/dh/Pages/default.aspx>

*Course outline:*

A list of topics to be covered and likely dates is shown on the next pages. This is an estimated plan. Topics may take more or less time than estimated in this plan.

## COURSE OUTLINE

<i>Date</i>	<i>Topic</i>	<i>Section</i>
22 Aug	INTRODUCTION Scarcity. Normative and Positive	1.1, 1.2 pp. 11-12
1. HOUSEHOLDS		
24 Aug	DEMAND CURVE	2.2
26, 29, 31 Aug	REPRESENTING TASTES Utility - ordinal or cardinal? - marginal utility - diminishing marginal utility Indifference Curves - marginal rate of substitution - convexity	4.1  4.2
2 Sept	BUDGET LINE	4.3
7, 9 Sept	CHOICE AND QUANTITY DEMANDED Individual consumer choice - rule: "marginal rate of substitution = good price ratio"	4.4, 4.Appendix (pp. 147-149)
12, 14, 16 Sept	COMPARATIVE STATICS Income changes - income expansion path - normal and inferior goods Price changes Individual demand curves Income and substitution effects Changes in price of other goods Market demand curve	5.1  5.2 5.3 5.4 5.5
19 Sept	In-class Review 7-9 pm FIRST MIDTERM	

21, 23 Sept	APPLICATIONS OF UTILITY MAXIMIZATION Labor Supply Savings Supply	
26, 28, 30 Sept 3 Oct	VALUING MARKET ACTIVITY Benefit Marginal Benefit Consumer Surplus	3.1

## 2. FIRMS

5, 7 Oct	PRODUCTION Production Function - marginal product - diminishing marginal product Iso-quant Marginal rate of technical substitution Returns to scale Short-run and long-run Short-run production Long-run production choice	6.1, 6.2, 6.3  6.4 (pp. 210-214)  6.5 6.2 6.3
10, 12 Oct	CHOOSING INPUTS AND LONG-RUN COST Isocost line Choosing input mix - rule: “marginal rate of technical substitution = input price ratio” Technology change Total Cost Curve	6.4 (pp. 214-216) 6.4 (pp. 217-222), 6.Appendix (pp 239-242) 6.6 6.7
14 Oct	SHORT-RUN AND LONG-RUN COST Fixed Sunk and Variable Cost Marginal and Average Cost Short-run and Long-run cost relationship	7.1, 7.2, 7.3 7.4 7.5

## 3. EVALUATING OUTCOMES

17, 19 Oct	Producer Surplus Net Benefit Created = Consumer Surplus + Producer Surplus The Planner Maximum Possible Net Benefit Created (Efficiency) Equity concerns	3.1
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#### 4. MARKET INTERACTIONS: HOUSEHOLDS AND FIRMS

21, 24, 26 Oct	STRATEGIC ANALYSIS: GAME THEORY	
	Game	12.1 (pp. 466-467)
	Extensive Form	
	Information Set	
	Strategy	
	Normal Form	12.1
	Nash Equilibrium	12.2 (pp. 469-475)
	Multiple Equilibria	
	Sub-game perfection/Backward Induction	12.3 (pp. 479-480)
	Credible Threats	12.4, 12.5
28 Oct	“MARKET” = MONOPOLY	
	Market Power	9.1
	Marginal revenue	9.2, pp. 372-373
	- downward sloping	
	Choosing quantity to maximize profit	9.3, pp 371
	- rule: “marginal revenue = marginal cost”	
31 Oct	In-class review	
	7 - 9 pm SECOND MIDTERM	
2, 4 Nov	“MARKET” = MONOPOLY (cont.)	
	Comparative statics	9.4
	Well-being lost with monopoly	9.5
	Government regulation	9.6
7, 9, 11, 14 Nov	“MARKET” = DUOPOLY	
	Bertrand Price Competition	11.1, 11.2
	Cournot Quantity Competition	11.3
	Welfare properties of duopolistic markets	
16 Nov	“MARKET” = OLIGOPOLY AND MARKET ENTRY	
	Perfect competition as a sequence of successful entries	
18, 28, 30 Nov	“MARKET” = COMPETITIVE MARKET	
	Price-taking	8.1, 8.2
	Firm’s choice of quantity to maximize profit	
	- rule: “marginal cost = price”	
	<i>Short-run</i> : fixed number of firms	2.3, 2.4, 8.3
	Short-run supply curve	
	Short-run equilibrium	
	Short-run producer surplus	

	<p><i>Long-run</i>: firms enter and exit: firm number variable</p> <p>Long-run equilibrium</p> <p>Long-run supply curve</p> <p>Long-run producer surplus</p>	8.4
2, 5 Dec	<p>NORMATIVE PROPERTIES OF COMPETITIVE EQUILIBRIA</p> <p>Why are long-run competitive equilibria so good.</p> <p>First Fundamental Welfare Theorem.</p>	
7 Dec	<p>LABOR MARKETS</p> <p>Demand for labor</p> <p>- rule: “VMPL = wage”</p> <p>Consumer and producer surplus in competitive market</p>	
9 Dec	In-class review	
11 Dec	7:30 - 10 pm	FINAL EXAM