

INTERMEDIATE MICROECONOMIC THEORY (ECON 3070-020 AND 3070-030)  
Department of Economics, University of Colorado  
Spring 2020

Professor:	Charles de Bartolome	Recitation instructor:
Office hours:	M 2:00-2:50 pm; Tu 1:30-2:30pm F 2:00 - 2:50pm.	Recitation time:
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		Office:

*Textbook:* Austan Goolsbee, Steven Levitt and Chad Syverson, (2020), *Microeconomics* (3<sup>rd</sup> Edition) WITH SAPLING ACCESS. Worth Publishers.

Buying textbooks is expensive. I recommend that you do NOT buy the textbook and Sapling Access separately. It is almost-always much cheaper to buy a bundle of the textbook plus Sapling Access than to buy these two products separately. I have negotiated with Worth Publishers for a competitive price, so I recommend that you buy the bundle at the CU Bookstore.

When you have bought the textbook with Sapling Access, you need to register your Sapling access code WHILE INSIDE the course's website on Canvas. Do NOT register your code on the MacMillan or Sapling websites.

For instructions on how to register the access code within Canvas:  
Go to the course website on Canvas.  
Click on module MacMillan Learning,  
then on the sub-module: Student Registration - Start Here

*Sapling Learning:*

Each student must enroll in Sapling Learning which contains two electronic learning systems: (2) Learning Curve is a weekly assignment which is designed to encourage you to read the material before class and (2) End of Chapter Problem Set is a set of problems on material after it has been covered in class. Both activities are graded.

Learning Curve assignments are posted on Thursdays at 4pm and are due on the following Wednesday at 10am. The first Learning Curve assignment is for practice only and is due at 10am on Wednesday 22 January. The first Learning Curve assignment which is graded is due at 10am on Wednesday 29 Sept.

End of Chapter Problems are posted on Thursdays at 4pm and are due on the following Monday at 10am. The first End of Chapter Problem Set is for practice only and is due at 10am on Monday 20 January. The first End of Chapter Problem Set which is graded is due at 10am on Monday 27 January.

“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).

*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 description:*


The course’s 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 and which goods to buy 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.

*Course assignments and Canvas webpage:*

All course assignments and most lecture notes are posted on the course webpage located on Canvas at: <https://canvas.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.

*Administrative Drop:*

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

*Using Clickers:*

Clickers will be used near the end of most classes to reinforce the main point of the lecture.

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.

I consider it cheating if a student asks another student to use his clicker "as if" he were present in the class. Both students will be reported to the Honor Council.

*Recitations:* Recitations start w/c 20 January. For w/c 20 January *only*, if your recitation is on Monday, please attend one of the Wednesday recitations (4-4:50 pm in HLMS 191 or 5-5:50 om in STAD 112)

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 Canvas 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 Sapling End of Chapter Problem Sets. The format of the exams will be closer to the format of the weekly problem set than to the End of Chapter Problem Sets.

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

FIRST MIDTERM: Monday 10 February, 7 - 9pm.  
Location: TBA

SECOND MIDTERM: Wednesday 18 March, 7 - 9pm.  
Location: TBA

The final exam will be held as:

FINAL: For Section 20: Sunday 3 May 7:30-9:00pm  
Location: ECON 119

For Section 30: Monday 4 May 4:30 - 7:00 pm  
Location: ECON 119

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.

*Grading:*

There are two midterm exams, a final exam, in-class clicker questions, assignments associated with 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% Learning Curve/End of Chapter Problem Sets  
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 Recitation 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.

*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.

*Accommodations for Disabilities:*

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to me in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at 303-492-8671 or [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu) for further assistance. If you have a temporary medical condition or injury, see Temporary Medical Conditions under the Students tab on the Disability Services website.

*Religious Observance:*

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly 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 the [campus policy regarding religious observances](#) for full details.

*Classroom Behavior:*

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those 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 race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. 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. For more information, see the policies on classroom behavior and the [Student Code of Conduct](#).

*Honor Code:*

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code ([honor@colorado.edu](mailto:honor@colorado.edu)); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from me. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

*Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation:*

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct intimate partner abuse (including dating or domestic violence), stalking, protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or [cureport@colorado.edu](mailto:cureport@colorado.edu) . Information about the OIEC, university policies, anonymous reporting, and the campus resources can be found on the OIEC website.

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

*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>
13 Jan	INTRODUCTION Scarcity and Markets Normative and Positive	1.1, 1.2 pp. 11-12
15 Jan	REVIEW Rationality Marginal Analysis Decision-Making using Marginal Analysis Use of Models	2
1. HOUSEHOLDS		
17, 22, 24 Jan	REPRESENTING TASTES Utility - marginal utility - diminishing marginal utility Indifference Curves - marginal rate of substitution - bowed-in Ordinal or cardinal? Substitution and Income effects New Welfare Economics	4.1  4.2
27 Jan	BUDGET LINE	4.3
29 Jan	CHOICE AND QUANTITY DEMANDED Review: Rationality Individual consumer choice - rule: “marginal rate of substitution = good price ratio”	4.4, 4.Appendix (pp. 130-132)

31 Jan, 3, 5 Feb	COMPARATIVE STATICS	5.1
	Income changes	
	- income expansion path	
	- normal and inferior goods	
	Price changes	5.2
	Individual demand curves	
	Income and substitution effects	5.3
	Changes in price of other goods	5.4
	Market demand curve	5.5
7 Feb	LABOR CHOICE	
	Labor Supply	13.2
	Savings	
10 Feb	In-class Review	
	7-9 pm FIRST MIDTERM	
12, 14, 17 Feb	VALUING GOODS MARKET ACTIVITIES	
	Individual Benefit	3.1
	Marginal Benefit	
	Marginal benefit curve $\equiv$ Individual demand curve	
	Net Benefit from Buying $\equiv$ Consumer Surplus	
	Society's Marginal Benefit	
	Marginal Social Benefit Curve $\equiv$ Market Demand Curve	
	Society's net benefit from buying	
19, 21 Feb	VALUING LABOR MARKET ACTIVITIES	
	Individual's marginal cost of labor	
	Individual's marginal cost of labor $\equiv$ individual's labor supply curve	
	Individual's net benefit from working	
	Society's Marginal Cost of labor	
	Social Marginal Cost Curve $\equiv$ Market labor supply curve	
	Society's net benefit from working	



## 2. FIRMS

24, 26, 28 Feb	PRODUCTION	
	Production Function	6.1, 6.2, 6.3
	- marginal product	
	- diminishing marginal product	
	Iso-quant	6.4 (pp. 189-193)
	Marginal rate of technical substitution	
	Returns to scale	6.5
	Short-run and long-run	6.2
	Short-run production	6.3
2 Mar	CHOOSING INPUTS AND COST	
	Isocost line	6.4 (pp. 193-196)
	Choosing input mix	6.4 (pp. 196-200), 6.Appendix (pp 214-217)
	- rule: “marginal rate of technical substitution = input price ratio”	
	Comparative Statics	
	- wage change	
	- output change	
	- technology change	6.6
4, 6, 9 Mart	SHORT-RUN AND LONG-RUN COST	
	Total Cost Curve	6.7
	Fixed Sunk and Variable Cost	7.1, 7.2, 7.3
	Marginal and Average Cost	7.4
	Short-run and Long-run cost relationship	7.5
11 Mar	PROFIT	
	Accountant’s, Managers’ and Society’s Profit	

### 3. “MARKET” INTERACTIONS: HOUSEHOLDS AND FIRMS TOGETHER

13, 16 Mar	THE BENCHMARK Producer Surplus Net Benefit Created = Consumer Surplus + Producer Surplus The Planner Maximum Possible Net Benefit Created (Efficiency)	3.1
18 Mar	In-class review 7 - 9 pm SECOND MIDTERM	
30 Mar, 1 Apr	THE BENCHMARK (CONT.) Deadweight loss Equity Concerns	
3, 6, 8 Apr	“MARKET” IS MONOPOLY Market Power Marginal revenue - downward sloping Choosing quantity to maximize profit - rule: “marginal revenue = marginal cost” Comparative statics Well-being lost with monopoly Barriers to entry Government regulation	9.1 9.2, pp. 335-338 9.3, pp 334-335 9.4 9.5 9.6
10, 13 Apr	STRATEGIC ANALYSIS: GAME THEORY Game Extensive Form Information Set Strategy Normal Form Nash Equilibrium	12.1 (pp. 419-421) 12.2 (pp. 423-429)
15, 17 Apr	“MARKET” = DUOPOLY Cournot Quantity Competition Welfare properties of duopolistic markets	11.4
20, 22 Apr	“MARKET” = OLIGOPOLY AND MARKET ENTRY Perfect competition as a sequence of successful entries	

24 Apr	<p>“MARKET” = COMPETITIVE MARKET</p> <p>Price-taking</p> <p>Firm’s choice of quantity to maximize profit</p> <p>- rule: “marginal cost = price”</p> <p><i>Short-run</i>: fixed number of firms</p> <p>Short-run supply curve</p> <p>Short-run equilibrium</p> <p>Short-run producer surplus</p> <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>	<p>8.1, 8.2</p> <p>2.3, 2.4, 8.3</p> <p>8.4</p>
27 Apr	<p>NORMATIVE PROPERTIES OF COMPETITIVE EQUILIBRIA</p> <p>Why are long-run competitive equilibria so good.</p> <p>First Fundamental Welfare Theorem.</p>	
29 Apr	<p>LABOR MARKETS</p> <p>Demand for labor</p> <p>- rule: “VMPL = wage”</p> <p>Consumer and producer surplus in competitive market</p>	
3 May	SECTION 20: 7:30 - 10:00 pm: FINAL EXAM in ECON 119	
4 May	SECTION 30: 4:30-7:00 pm: FINAL EXAM in ECON 119	