### 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  | Recitation time:   |  |
|               | F 2:00 - 2:50pm.  | Recitation place:  |  |
| Office:       | Econ 203.   | Recitation office hours:   |  |
| e-mail:       | charles.debartolome@colorado.edu  | Office:  |  |
| Textbook:     | Austan Goolsbee, Steven Levitt and Chad Syverson, (2020), <i>Microeconomics</i> (3 <sup>rd</sup> Edition) WITH SAPLING ACCESSS. Worth Publishers.   |  |  |
|               | Buying textbooks is expensive. I reco<br>and Sapling Access separately. It is a<br>of the textbook plus Sapling Access t<br>have negotiated with Worth Publishe<br>that you buy the bundle at the CU Bo                 | ommend that you do NOT buy the textbook<br>lmost-always much cheaper to buy a bundle<br>than to buy these two products separately. I<br>rs for a competitive price, so I recommend<br>okstore. |  |
|               | When you have bought the textbook with Sapling Access, you need to register<br>your Sapling access code WHILE INSIDE the course's website on Canvas.<br>Do NOT register your code on the MacMillan or Sapling websites. |  |  |
|               | For instructions on how to register the access code within Canvas:<br>Go to the course website on Canvas.   |  |  |
|               | Click on module MacMillan Learning,   |  |  |
|               | then on the sub-module: Stud  | ent Registration - Start Here  |  |
| Sapling Learn | iing.   |  |  |
| Supring Learn | Each student must enroll in Sanling I   | earning which contains two electronic  |  |

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 duata2E0@nxios-Wining

"Clickers"

Attendance at class:

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 associaated 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 > 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

important with respect to individuals and topics dealing with race, color, national origin, sex, preg

## COURSE OUTLINE

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

| 31 Jan, 3, 5 Feb | COMPARATIVE STATICS<br>Income changes<br>- income expansion path<br>- normal and inferior goods   | 5.1  |
|------------------|---|------|
|                  | Price changes   | 5.2  |
|                  | Individual demand curves<br>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<br>7-9 pm FIRST MIDTERM   |      |
| 12, 14, 17 Feb   | VALUING GOODS MARKET ACTIVITIES<br>Individual Benefit<br>Marginal Benefit<br>Marginal benefit curve = Individual demand curve<br>Net Benefit from Buying = Consumer Surplus             | 3.1  |
|                  | Society's Marginal Benefit<br>Marginal Social Benefit Curve = Market Demand Curve<br>Society's net benefit from buying  |      |
| 19, 21 Feb       | VALUING LABOR MARKET ACTIVITIES<br>Individual's marginal cost of labor<br>Individual's marginal cost of labor ≡individual's labor supply curve<br>Individual's net benefit from working | e    |
|                  | Society's Marginal Cost of labor<br>Social Marginal Cost Curve ≡Market labor supply curve<br>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 CHOOSI&1bD@n

# 3. "MARKET" INTERACTIONS: HOUSEHOLDS AND FIRMS TOGETHER

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

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