
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 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.

Pre-requisites:
EITHER ECON 1000 (Introduction to Economics) OR Econ 2010 (Principles of Microeconomics);

AND

EITHER ECON 1078 and 1088, OR MATH 1071 and 1081, OR MATH 1071 and 1300, OR APPM 1350.

Course assignments and CULearn:
All course assignments, problem sets and some lecture notes are posted on CULearn at: https://cuconnect.colorado.edu
In the past, some students have had difficulty in downloading some of the posted pdf files. 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 > Internet 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 > Multipage Printing > 6.

**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.

In addition, there are many questions at the end of each chapter in the textbook. I particularly encourage you to do the questions listed on this syllabus - the answers are printed at the back of the textbook.

The exams will loosely follow the format of the problem sets.

**Attendance at class:**

Woody Allen 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.

**Grading:**

There are two midterms, an experiment and a final exam. The student’s grade (before any adjustment for non-attendance) will be determined as:

30% First Midterm, 30% Second Midterm, 10% Experiment and 30% Final.

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.
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 and the final will be given as:
  FIRST MIDTERM:       Monday 20 Sept
                     in MUEN E0046
                     7:00 - 9:00 p.m.
  SECOND MIDTERM:     Monday 25 Oct
                     in MUEN E0046
                     7:00 - 9:00 p.m.
  FINAL:             Tuesday 14 Dec
                     in RAMY N1B23
                     7:30 -10:00 p.m.

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.

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.

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, Willard 322 and


**Harassment Policy:**

The University of Colorado at Boulder policy on Discrimination and Harassment, the University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based on race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at (303) 492-2127 or the Office of Judicial Affairs 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://www.colorado.edu/odh](http://www.colorado.edu/odh)

**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. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences in race, culture, religion, politics, sexual orientation, gender variance, 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/classbehavior.html](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). Other 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.
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<th>Date</th>
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<th>Chapter</th>
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<td><strong>1. INTRODUCTION</strong></td>
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<td>23, 25 Aug</td>
<td>INTRODUCTION</td>
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<td>Ten Big Ideas</td>
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<td>Normative and positive economics.</td>
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<td>Property Rights: the problem of the commons</td>
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<td><strong>2. HOUSEHOLDS</strong></td>
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<td>27 Aug</td>
<td>HOUSEHOLDS: BUDGET SETS</td>
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<td>Sets</td>
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<td>Economically possible set</td>
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<td>HOUSEHOLDS: REPRESENTING TASTES</td>
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<td>- diminishing marginal utility</td>
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<td>Indifference curves</td>
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<td>New welfare economics</td>
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<td>Marginal Rate of Substitution</td>
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<td><strong>Problem Set 1:</strong> Consumer preferences</td>
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<td>8, 10, 13 Sept</td>
<td>HOUSEHOLDS: CHOICE AND MARKET QUANTITIES</td>
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<td>Individual consumer choice</td>
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<td>Income expansion path</td>
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<td>- normal and inferior goods.</td>
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<td>Demand curves</td>
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<td>Income and substitution effects</td>
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<td>- normality and downward-sloping demand curves</td>
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<td>Market demand</td>
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<td><strong>Problem Set 2:</strong> Consumer Choice</td>
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<td><strong>Textbook problems:</strong> Chapter 4, Q 2, 5</td>
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15, 17 Sept  APPLICATIONS OF HOUSEHOLD DEMAND  5 (pp. 93-104.4)
Labor Supply
Savings Supply

Problem Set 3:  Labor Supply and Savings Supply
Textbook problems:  Chapter 5, Q 1

also: pp 683.5 - 685

20 Sept  FIRST MIDTERM (7:00 - 9:00 p.m. in MUEN E0046 )

22, 24, 27, 29  HOUSEHOLDS: VALUING MARKET ACTIVITY  5 (pp. 112.9-115.9,
Sept  Benefit and 118.5-120.9)
Marginal Benefit
Consumer Surplus

Problem Set 4:  Net Benefit (Consumer Surplus)

3. FIRMS

1, 4, 6 Oct  FIRMS: PRODUCTION  8
Production process and technology
Production function
- diminishing marginal returns
- marginal product
Isoquants
Marginal rate of technical substitution
Returns to scale
Short-run and long-run production functions

Problem Set 5:  Production
Textbook problems:  Chapter 8, Q 3, 8, 8

8 Oct  FIRMS: COSTS  9
Cost functions
Isocost curves
Minimizing the cost of production
- “marginal rate of technical substitution
  = factor price ratio” rule
Input substitution
11Oct  FIRMS: COSTS (cont)  10
Short-run and long-run
Marginal cost functions
Average cost functions.

Problem Set 6: Costs
Textbook problems: Chapter 10, Q 1

4. “MARKET” INTERACTIONS: HOUSEHOLDS AND FIRMS

13,15,18 Oct  STRATEGIC ANALYSIS: GAME THEORY  11
Extensive form
Information sets
Strategy
Normal form
Nash Equilibrium
Credible Threats
Subgame Perfect Equilibrium
Backward Induction

Problem Set 7: Game Theory
Textbook problems: Chapter 11, Q 2, 6

20,22 Oct  “MARKET”: MONOPOLY  17
Marginal revenue curve
Maximizing profit
- “marginal revenue = marginal cost” rule
Well-being created by monopoly
Socially-optimal single price

Problem Set 8: Monopoly
Textbook problems: Chapter 17, Q 4.

25 Oct  SECOND MIDTERM (7:00 - 9:00 p.m. in MUEN E0046)

27, 29 Oct  “MARKET”: MONOPOLY: REGULATION  18
Social inefficiency: deadweight loss
Natural Monopoly

omit: pp. 237.7 - 251,
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omit: Appendix B

omit: pp. 429.4 - 432
omit: pp. 436.5 - 441
Sustainable Monopoly
Average-cost pricing
Rate of return regulation
Price-cap regulation

Problem Set 10: Regulation
Textbook problems: Chapter 18, Q 2, 5

5,8,10 Nov “MARKET”: DUOPOLY
Cournot Quantity Model
Welfare properties of duopolistic markets

Textbook problems: Chapter 19, Q 1

12 Nov “MARKET”: OLIGOPOLY AND MARKET ENTRY
Perfect competition as a sequence of successful entries

Problem Set 10: Duopoly/Oligopoly

15, 17 Nov “MARKET”: PERFECTLY-COMPETITIVE MARKETS
IN SHORT-RUN
Short-run supply of individual firm
Short-run Equilibrium

Textbook problems: Chapter 14, Q 2.

19, 29 Nov “MARKET”: PERFECTLY-COMPETITIVE MARKETS
IN LONG-RUN
Long-run equilibrium
Dynamic changes

Textbook problems: Chapter 15, Q 1, 2.

1 Dec NORMATIVE PROPERTIES OF COMPETITIVE EQUILIBRIA
Why are long-run competitive equilibria so good?
First Fundamental Welfare Theorem
Second Fundamental Welfare Theorem
Problem Set 11: Perfect Competition

3 Dec  FACTOR MARKETS
       Labor Market
       Capital Market

       Textbook problems: Chapter 26, Q 3, 7 8.

5. COURSE SUMMARY: EXPERIMENT

6,8,10 Dec  EXPERIMENT

14 Dec  FINAL EXAM (7:30 - 10:00 pm in RAMY N1B23)