Econ 310 – Syllabus Spring 2025

Welcome

Welcome to Econ 310! This is a "flipped" course, which means that every week before coming to class you'll watch the lecture videos I pre-recorded and "lecture" time will be devoted to practicing that material and answering your questions about those videos. All lectures videos are about 5-15 minutes in length and can be found on the course Canvas page; there are a very large number of these videos, but they're organized and labeled clearly.

This syllabus lets you know which videos to have watched for each week of class. There are six exams in this class: 4 quizzes, a midterm, and a final. Note that, even though you can watch the lectures at your own pace, the quizzes are due on specific dates/times, and the midterm and final are held during specific dates and times. Make sure your schedule is open for the midterm and the final exam.

Professor Contact Information

Office Hours: Wednesdays 9am-11:50am – 1168 MVS Hall *Email:* <u>bryan.tomlin@csuci.edu</u>

Course Description

We will discuss theoretical models and applied tests of how individuals make decisions in market settings, including decision making under uncertainty. We will also discuss theoretical treatments of how firms maximize profits under various competitive environments. Our treatment of firm competition will segue into a discussion of the core concepts of game theory and their applications. A thorough understanding of this material will leave you well prepared for future microeconomic courses such as labor economics and industrial organization. Passing this course will REQUIRE an understanding of algebra and basic calculus, but that's okay, because this material is sufficiently covered in the prerequisite math courses (see below).

Program Learning Goals: These are the skills we try to help you build in all MVS courses

- 1. Critical Thinking
- 2. Oral Communication
- 3. Written Communication
- 4. Collaboration
- 5. Conduct (Ethics)
- 6. Competency in Discipline

<u>Course Learning Outcomes</u>: Upon completion of this course, you will be able to

- 1. Explain the economic behavior of firms and households (1, 3, 6)
- 2. Describe and apply the scientific method to economic behavior, and devise methods for identifying the factors that motivate individuals and firms (1, 3, 6)
- 3. Apply the principles of competitive markets to identify factors that affect market prices and output (1, 3, 6)
- 4. Describe and distinguish between various forms of individual preferences over commodities, risky assets, and psychological goods, and understand how to identify preference types from observed behavior (1, 3, 6)
- 5. Evaluate the manner(s) in which public policy may affect behavior (1, 3, 6)

ECON 110, ECON 111, and MATH 140 or MATH 150

Texts

Recommended (not required): Varian, Hal R.; "Intermediate Microeconomics, A modern Approach," Any Edition, *W. W. Norton & Company*

Grading and Examinations

You may use all of your notes/materials to take all exams (quizzes, midterm, and final).

<u>Quizzes</u> can be taken in groups with your classmates if you like, and while your questions will all be the same, the answers will differ due to my use of randomization to populate numeric values. The midterm and final must be taken <u>by yourself</u>.

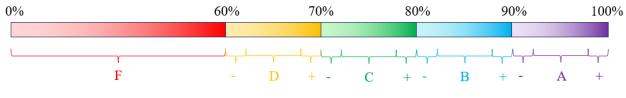
Quizzes (12% each, 48% total)			
Quiz Number	Lecture Videos	Due (before midnight on	
	Covered	this day)	
Quiz 1	1 - 21	Friday, February 7	
Quiz 2	22 - 44	Friday, February 28	
Quiz 3	57 - 67	Friday, April 11	
Quiz 4	68 - 76	Friday, May 2	
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The midterm and the final are held on specific dates and times: Midterm (26%) March 11 in class Covers lecture videos 1.56

Midterm (26%) – March 11, in class – Covers lecture videos 1-56

Final Exam (26%) – Finals week; see final exam schedule – Covers lecture videos 57-84

Your letter grade will be determined as shown below, with "+" or "-" assigned if your grade falls in the top or bottom quartile of any range, respectively. (E.g. grades between 80.00% and 82.50% earn a B-, while grades between 87.50% and 89.99% earn a B+).



Missed Exam/Quiz Policy

Make-up exams will be scheduled for students who have legitimate and appropriate reasons for having missed an examination. All exam dates are listed on this syllabus.

Academic Honesty

Academic honesty is of the utmost importance, and any academic misconduct will be subject to the strictest enforcement possible. This includes taking the midterm or the final with anyone's help – the midterm and final must be taken by yourself.

See http://www.csuci.edu/studentlife/judicial-affairs/academic-dishonesty.htm for more information.

Course Schedule

Lecture Week (Date)	Videos to have reviewed before lecture	Notes
1 (1/21)	1-9	Introduction and syllabus review. Review of key mathematical concepts. Attempt Module 1 Practice Problems.
2 (1/28)	10-21	Modeling consumer choice sets. Practice Quiz 1 due.
3 (2/4)	22-34	Modeling consumer preferences. Quiz 1 due 2/7.
4 (2/11)	22-34	More preference modeling and introduction to optimal choice. Attempt Module 2 & 3 practice.
5 (2/18)	35-46	Optimal choice: utility maximization subject to a constraint. Elasticity. Practice Quiz 2 due. Attempt Module 4 Practice Problems.
6 (2/25)	42-56	Labor-leisure modeling. Quiz 2 due 2/28.
7 (3/4)	47-56	Market demand. Midterm review. Practice Midterm due. Attempt Module 5 Practice Problems.
8 (3/11)	Midterm	Midterm
9 (3/18)	Spring break	Spring break
10 (3/25)	57-67	Choice under uncertainty. Attempt Module 6 Practice Problems
11 (4/1)	57-67	Theory of the firm. Cost minimization, profit maximization and the supply function. Practice Quiz 3 due. Attempt Module
12 (4/8)	68-74	Profit maximization. Perfect competition. Monopoly. Price discrimination. Quiz 3 due 4/11. Attempt Module 7 Practice Problems.
13 (4/15)	68-80	Cournot duopoly. Introduction to game theory and Nash equilibria. Attempt Module 8 Practice Problems.
14 (4/22)	77-84	Game theory: modeling simultaneous games using the normal form. Location games. Mixed strategies. Practice Quiz 4 due.
15 (4/29)	77-85	Sequential games. Stackelberg duopoly. Quiz 4 due 5/2.
16 (5/6)	Review for Final Exam	Repeated games. Review for Final Exam. Practice Final due.

Before attending class, prepare yourself by watching the below videos. Come prepared with questions.

Lecture Schedule (Topics and Tests)

Lecture Video #s	Topics Covered	Exam(s) in which this material is tested
1-9	Math Review	All quizzes, midterm, final
10-21	Consumer theory, choice sets, budget constraints, effect of policies on consumer choice sets	Quiz 1, midterm
22-28	Preference modeling, indifference curves, graphical and mathematical representation of preferences	Quiz 2, midterm
29-34	Mathematical modeling of preferences using utility, specific utility functional forms and their implications	Quiz 2, midterm
35-44	Consumer choice, utility maximization subject to the budget constraint, deriving demand curves and interpreting their properties	Quiz 2, midterm
45-46	Elasticity	Midterm
47-56	Application of consumer choice to the labor market, labor incentives, and effect of policies on labor decisions	Midterm
57-67	Choice under uncertainty, risk preferences, assessing relative risk preferences and eliciting willingness to pay for a risky prospect	Quiz 3, final
68-76	Firm profit, profit maximization, perfect competition, monopoly, duopoly models	Quiz 4, final
77-85	Game theory, simultaneous games, location games, finding equilibrium in a normal form game. Sequential games and Stackelberg duopoly.	Final

All lectures are numbered (1-84) and are intended to be watched in that order.

Disability Statement: If you are a student with a disability requesting reasonable accommodations in this course, please visit Disability Accommodations and Support Services (DASS) located on the second floor of Arroyo Hall, or call 805-437-3331. All requests for reasonable accommodations require registration with DASS in advance of need. You can <u>apply for DASS services online</u>. Faculty, students and DASS will work together regarding classroom accommodations. You are encouraged to discuss approved accommodations with your faculty.

Subject to change statement: This syllabus and the assignments and dates listed in it are subject to change with notice.