



ECO333: Intermediate Microeconomics

Fall 2024 | Hodel 2 NE | TR 2:20-3:50 PM

CALLICLES. How you keep on, Socrates, harping on the same old string about food and drink and doctors and sandals and such-like trivialities!

——Plato 380 B.C.

Instructor

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Office Hours: By appointment

Course Description

As found in the college catalogue: *This course builds on many of the concepts and theories learned in ECO303, introducing formal analytical tools such as linear algebra and differential calculus to provide an advanced understanding of microeconomic theory. Following this class, students will be prepared to model and understand the economic decisions faced by individuals, firms, and government, and to analyze how changes in the economic environment impact these choices. Topics covered include consumer and producer theory, general equilibrium, industrial organization, and game theory. Prerequisite(s): ECO303.*

This course is an introduction to the formal microeconomic tools of price theory and game theory. With these tools, we will cover markets, taxation, welfare, consumption, production, competition, monopoly, oligopoly, information, risk, uncertainty, and more. This course is designed such that the formal tools are taken seriously but in service to learning the economic way of thinking. To this end, there will be a consistent focus on puzzles and applications, both in lectures and in assignments. Puzzles can range from the mundane to the serious: How much should renters care about property tax? Is pet ownership good for your health? Should Amazon be broken up? Why do white cars get more speeding tickets? Which imports, if any, should be subject to tariffs? Does capital punishment stop crime?

Learning Objectives

1. Learn the basic tools of price theory and game theory.
2. Apply these tools to novel topics.
3. Find practical uses for the economic way of thinking.
4. Understand, analyze, and critique microeconomic research.

Prerequisites

1. ECO303; knowledge of the basic terms of economics will be assumed.
2. Familiarity with basic geometry and calculus.

Required Texts

1. Jack Hirshleifer, Amihai Glazer, and David Hirshleifer, *Price Theory and Applications: Decisions, Markets, and Information*, 7th edition. Cambridge University Press.
Abbreviated below as **HGH**.
2. Selected readings and videos, available through Canvas.

Optional Texts

1. Armen Alchian and William Allen. *Universal Economics*, Jerry Jordan, editor. Liberty Fund. Available online here: <https://oll.libertyfund.org/titles/universal-economics>.
The classic intermediate micro textbook; great for practice questions.
2. D. McCloskey. *The Applied Theory of Price*. Macmillan. Available online here: <https://www.deirdremccloskey.com/docs/price.pdf>
Difficult, but the best arsenal of practice questions.
3. Steven Landsburg. *Price Theory and Applications*. Cengage Learning.
Readable and intuitive.
4. Edgar Browning and Mark Zupan. *Microeconomics: Theory & Applications*. Wiley.
Modern classic with clear exposition and figures.

Note on textbooks: not *that* much has changed in the canon of microeconomic theory since Alfred Marshall's *Principles of Economics* (1890). This means that most textbooks contain (mostly) the same content with varying form, emphasis, and applications. However, much can be learned by *comparing* these texts.

Structure and Grading

Class meetings will be a mix of lectures, structured activities, and open discussion.

Your final grade is based on the following:

Participation: 10%

Includes survey completions (5%) and in-class participation (5%).

Problem sets: 25%

Three homework assignments, quantitative and qualitative (1 x 5%, 2 x 10%). These will be available at least one week before the due date.

LLM writing assignment: 20%

See handout; more information to follow. Check-in due Tuesday, October 15th (5%); final project due Tuesday, November 26th (15%).

Exams: 45%

One midterm (20%) and final (25%); both will be cumulative *up to that point in the course*.
Material from required reading and lectures will be fair game.

Extra Credit: +5%

Write a one-page essay convincingly answering the following question: Why do governments build infrastructure that lasts so long?

Grade Breakdown:

| Letter | Grade | Quality | Quality Points |
|--------|-------------------------------|---------------|----------------|
| A | 93-100 | Superior | 4.00 |
| A- | 90-92 | | 3.67 |
| B+ | 87-89 | Above Average | 3.33 |
| B | 83-86 | | 3.00 |
| B- | 80-82 | | 2.67 |
| C+ | 77-79 | | 2.33 |
| C | 73-76 | Average | 2.00 |
| C- | 70-72 | | 1.67 |
| D+ | 67-69 | | 1.33 |
| D | 63-66 | Below Average | 1.00 |
| D- | 60-62 | | 0.67 |
| F | 0-59 | Failure | 0.00 |
| WF | Withdraw While Failing | | 0.00 |
| XF | Academic Disciplinary Failure | | 0.00 |

Not Included in GPA Calculation:

P: Pass

I: Incomplete

W: Withdrawal

WP: Withdrawal while Passing

X: Audit

N: Non-credit course

T: Transfer

Not Included in GPA Calculation:

P: Pass

I: Incomplete

Policies

Technology

Using digital technology for notetaking during lectures is permitted if used flat on a desk, but, for the benefit of your peers, upright laptops are not permitted. Recording of lectures, audio or video, is not permitted. The use of LLMs is required for the LLM writing assignment. The use of LLMs is permitted for the problem sets, but I strongly encourage you to first attempt them by yourself and then work with your peers. You are responsible for all the work you turn in.

Late work

Assignments submitted past the designated deadline are ineligible for credit. In case of emergency, credit will be shifted to your final exam.

Academic Integrity

As found in the college catalog: *The principles of truth and honesty are recognized as absolutely essential in every community of learning. It is expected that these principles will be scrupulously followed in all academic endeavors at Patrick Henry College, including, but not limited to, the preparation of all papers and reports and the taking of examinations. All academic work must be done by the student without unauthorized aid. Any compromise of truth or honesty, including, but not limited to, plagiarism, unauthorized collaboration, violation of guidelines under which the work is to be done, fabrication of data, unauthorized use of computer data or computer tools (including artificial intelligence), submission of a paper twice for the same course, submission of the same paper for multiple courses, and excessive revision by someone other than the student, may be considered sufficient grounds for suspension or expulsion from the College. Students may be given a grade of "XF" if it is determined that they have plagiarized or cheated in a course. The "XF" on a transcript indicates that a student violated integrity of scholarship policies. Students who successfully retake a course for which they have received an "XF" will have the "X" removed from their transcripts although the "F" will remain. The "XF" (or "F") and the grade earned in the retaken course will be used to calculate the grade point average.*

Disability Accommodations

As found in the college catalog: *Patrick Henry College is committed to providing reasonable accommodations for students with disabilities. Students with a documented disability must contact the Office of the Dean of Academic Affairs before the end of the Drop/Add period in their first semester (or as soon as possible after the initial diagnosis) to request accommodations and provide documentation to verify the disability. Before the end of the Drop/Add period at the start of each term, students must also request accommodations in writing from the professor from whom they seek accommodations. Professors who have not been notified by the end of the Drop/Add period are not obligated to provide accommodations.*

Attendance

Routine absence will negatively impact your participation grade. As found in the college catalog: *Students are strongly encouraged to attend each and every class scheduled during the semester. There is no better way to perform well in any class than by attending the regularly scheduled lectures. However, there may be times when students cannot make a lecture, due to illness, participation in a sanctioned college event, or other conflicting commitments. While students should strive to avoid such conflicts, college is a very busy time and conflicts may occur. Patrick Henry College does not mandate an academic penalty for a student who misses a class, although a zero may be received for any unfulfilled class requirements. Students participating in college sanctioned events will know about any conflicts well in advance and are expected to discuss these with their professors to arrange for dealing with affected assignments prior to the absence.*

Course Schedule

This schedule is tentative; if it proves to be too ambitious, I will try to say less about each topic rather than cut topics. I will notify you at least one week in advance if I elect to make substantial changes, including assignment due dates.

* = Required

1. August 27 – The Economic Way of Thinking

Introduction, Economic Science, Optimization, Equilibrium, Ceteris Paribus, Variation, Causation, Economies

Reading

* Syllabus

HGH: 3-24

Gary Becker. 1976. “The Economic Approach to Human Behavior” in *The Economic Approach to Human Behavior*: pp 3-14

Additional Resources

Douglas Hofstadter “Analogy as the Core of Cognition” Stanford Presidential Lecture:
https://youtu.be/n8m7lFQ3njK?si=UGRrTb_M6tSHpHRG

2. August 29 – Supply and Demand I

Coordination, Exchange, Price Formation, Functions

Reading

* HGH: 28-38

* F.A. Hayek. 1945. “The Use of Knowledge in Society,” *American Economic Review* 35 (4): 519-530.

Due

Survey #1

3. September 3 – Supply and Demand II

Price Elasticity, Curve Shifts, Welfare

Reading

* HGH: 132-144, 203-207

* Steven Landsburg. 1993. “The Indifference Principle,” in *The Armchair Economist*: 38-52.

4. September 5 – Supply and Demand III

Price Controls, Quotas, Taxation, Tariffs, Subsidies

Reading

* HGH: 39-49, 207-216

* Gordon Tullock. 1967. “The Welfare Costs of Tariffs, Monopolies, and Theft,” *The Western Economic Journal* 5: 224-232

5. September 10 – Consumption I

Utility, Preference, Indifference, Satiation, Goods and Bads

Reading

* HGH: 70-90

Due

Problem Set #1

6. September 12 – Consumption II

Budget Constraints, Consumer Choice, MRS, Maximization, Duality

Reading

* HGH: 93-104

Additional Resources

Constrained Optimization: https://youtu.be/Ob56YXIV3rM?si=kZ_1_6-iwc07Ss6X

(September 17 – No Class – PHC Faith and Reason Lecture)

7. September 19 – Consumption III

Substitutes and Compliments, Income and Substitution Effects, Demand Curve

Reading

* HGH: 104-125

HGH: 127-152

8. September 24 – Production I

Specialization, Production, Firms, Cost Functions, Cost Min, Profit Max

Reading

* HGH: 49-61, 157-172, 176-182

Ronald Coase. 1937. "The Nature of the Firm." *Economica* 4 (16): 386–405.
Armen Alchian and Harold Demsetz. 1972. "Production, Information Costs, and Economic Organization." *The American Economic Review* 62 (5): 777-795.

9. September 26 – Production II

Supply Curve, Short Run, Long Run, Profit Conditions

Reading

* HGH: 192-199

10. October 1 – Production III

Inputs, Scale

Reading

* HGH: 199-203, 340-352

Due

Survey #2

11. October 3 – Markets

Competition, General Equilibrium, Partial Equilibrium

Reading

* Armen Alchian and William Allen. "Facts of Life," *Universal Economics*. 274-284

* Armen Alchian. 1950. "Uncertainty, Evolution, and Economic theory." *Journal of Political Economy* 58 (3): 211-221.

* Robin Hanson. 2024. "Incentives Are Not Enough," Overcoming Bias Blog:
<https://www.overcomingbias.com/p/incentives-are-not-enough>

Due

Problem Set #2

12. October 8 – Midterm Exam

Study!

(October 10 – No Class – October Break)

13. October 15 – Market Structure I

Competition, Monopoly

Reading

* HGH: 221-238

* F.A. Hayek. 1948 [2016]. “The Meaning of Competition,” *Econ Journal Watch* 13: 360-372.

Due

LLM Writing Assignment Check-in

14. October 17 – Market Structure II

Monopoly, Price Discrimination, Oligopoly

Reading

* HGH: 238-248

* Harold Demsetz. 1982. “Barriers to Entry,” *American Economic Review*. 72 (1): 47-57.

15. October 22 – Strategic Behavior I

Games, Optimization, Equilibrium, Coordination

Reading

* HGH: 280-288

* Theodore Turocy and Bernhard von Stengel. 2002. “Game theory.” in *Encyclopedia of Information Systems*.

Due

Survey #3

16. October 24 – Strategic Behavior II

Oligopoly, Cartels, Conflict, Repeated Games

Reading

* HGH: 557-563, 288-300

HGH: 300-306

17. October 29 – Strategic Behavior III

Management, Contracting, Principal-agent Relationships, Alignment

Reading

- * HGH: 385-390
- * Piece Rate Handout
- * Sebastian Bensusan. 2024. "Incentives as Selection Effects" SBensu Blog:
<https://blog.sbensu.com/posts/incentives-as-selection-effects/>
- * Armen Alchian and William Allen. From "Chapter 39: Your Earnings: How and When." *Universal Economics*. 614-618.

18. October 31 – Property Rights I

Transaction Costs, Externalities, Coase Theorem

Reading

- * HGH: 433-440, 508-515
- * Armen Alchian. 1965. "Some Economics of Property Rights," *Il Politico* 30 (4): 816-829.
- * John Nye. 2008. "The Pigou Problem," *Regulation* 31 (1): 32-37.

(November 5 – No Class – Fall Break)

19. November 7 – Property Rights II

Public Goods, Commons, Clubs

Reading

- * HGH 515-521
- * Harold Demsetz. 1967. "Toward a Theory of Property Rights," *American Economic Review* 57(2): 347-359.

How NYC Gets Its Water:

<https://www.nytimes.com/interactive/2016/03/24/nyregion/how-nyc-gets-its-water-new-york-101.html>

Ronald Coase. 1974. "The Lighthouse in Economics." *The Journal of Law and Economics* 17 (2): 357-376.

Tyler Cowen. 1985. "Public Goods Definitions and Their Institutional Context: A Critique of Public Goods Theory," *Review of Social Economy* 43 (1): 53-63.

20. November 12 – Information I

Decision Making, Bayes Rule, Gambles, Risk

Reading

- * HGH: 308-312
- * 3Blue1Brown, Bayes Theorem:
https://youtu.be/HZGCoVF3YvM?si=l89UHuazfkV9_yFd

3Blue1Brown, More on Bayes Theorem:

https://youtu.be/lG4VkPoG3ko?si=N83gk0_eec6Xg6I

Due

Survey #4

21. November 14 – Information II

Asymmetry, Moral Hazard, Adverse Selection, Insurance

Reading

* HGH: 312-316, 317-322

* George Akerlof. 1970. "The Market for "Lemons": Quality Uncertainty and the Market Mechanism," *The Quarterly Journal of Economics* 84 (3): 488-500.

* Armen Alchian and William Allen. "Chapter 34: Risk and Insurance," *Universal Economics*. 543-556.

22. November 19 – Time

Intertemporal Choice, RoR, Finance, Financial Equilibrium, Yield Curve

Reading

* HGH: 456-478

* Armen Alchian and William Allen. "Chapter 30: Arithmetic of Capital Values," *Universal Economics*. 475-490.

* Armen Alchian and William Allen. "Chapter 35: The Full Equilibrium: Equalized Rates of Return," *Universal Economics*. 558-570.

23. November 21 – Pricing

Auctions, Bargaining, Prediction Markets

Reading

* HGH: 443-448

* Julian Simon. 1968. "An Almost Practical Solution to Airline Overbooking," *Journal of Transport Economics and Policy* 2 (1): 201-202.

* Scott Alexander. 2022. "Prediction Market FAQ," Astral Codex Ten Blog:

<https://acxreader.github.io/p/prediction-market-faq>

24. November 26 – Modeling

Explanation, Prediction, Lobbying

Reading

- * Armen Alchian. 1950. "Uncertainty, Evolution, and Economic theory." *Journal of Political Economy* 58 (3): 211-221.
- * Peter Leeson, R. August Hardy, and Paola A. Suarez. 2023 "Hobo Economicus," *The Economic Journal* 132: 2325-2338.
- * David Henderson. "Rent Seeking," in *The Concise Encyclopedia of Economics*.
<https://www.econlib.org/library/Enc/RentSeeking.html>
- * Gordon Tullock. 1975. "The Transitional Gains Trap." *The Bell Journal of Economics* 6 (2): 671-678.

Due

LLM Writing Assignment Final

(November 28 – No Class – Thanksgiving Break)

25. December 3 – Applications

Supply of Labor, Culture, Norms

Reading

- * HGH: 376-384
- * Robin Hanson. 2023. "Culture is Coordination," Overcoming Bias Blog:
<https://www.overcomingbias.com/p/culture-is-coordination>
- * Armen Alchian and William Allen. From "Demand for Productive Resources,"
Universal Economics. 457-461.

Due

Problem Set #3

Survey #5

26. December 5 – Economic Way of Thinking

Conclusion, Review, New and Old Puzzles

Reading

TBD

27. December 10 – Final Exam

Study!