

INDIANA UNIVERSITY
Department of Economics

E251-Fundamental of Economics

Instructor: Chao Wang

Office: 204, Wylie Building

Virtual meeting time: Each Thursday 10am to 11:15am

Zoom link: <https://iu.zoom.us/j/99832458156> (No password)

Office Hour: Mondays and Wednesdays 10am to 12pm (by zoom)

Office Hour zoom ID: 981 5715 6821

Password: 175093

Email: cw102@iu.edu

All times are EST

Prerequisites

None. However, a basic understanding of high school algebra, geometry, and graphical presentation is expected.

Course Description

This course is part one of a sequence of two courses designed to introduce students to economic reasoning and essential economic concepts. E251 is primarily but not exclusively focused on the broad field of microeconomics. It is specifically designed to give students familiarity with the language common to economics, an elementary ability to analyze various microeconomic problems common in our economy and society, along with being able to think through everyday microeconomic problems. Models and theories studied will help the student to understand how producers could best allocate scarce resources to produce goods and services. Likewise, the student will gain insight into what drives consumers to give up resources to obtain goods and services produced by others. Upon completion of this course, the student should be able to apply economic modeling tools to both business situations and to problems and situations from everyday life. For example, students will be able to address contemporary issues such as the economics of health care, housing, climate change, and others using a sound economic reasoning approach.

Class Format

This course uses an asynchronous online pedagogy. You will need the following in order to participate in this course: computer or tablet, reliable internet connection, microphone, and access to Canvas using a supported web browser. There is no exception to this equipment and internet service requirement.

Course Learning Outcomes

At the conclusion of the course, students should be able to:

1. Interpret and use appropriate economic language as it pertains to the basic tools used in economics, with an emphasis on marginal analysis used in consumer and firm behavior.
2. Explain the basic concepts of scarcity and opportunity costs.
3. Describe and illustrate the properties of goods and the importance of property rights.
4. Describe the fundamentals of non-strategic and strategic decision making from the perspective of individual choice, including price taking behavior and non-cooperative game theory.
5. Define and describe the four basic market types that are applied to the production and consumption of goods and services.
6. Show how equilibria, prices and quantities, are determined in markets in both the short-run and the long-run.
7. Evaluate markets in terms of economic efficiency, resource allocation, and price effects on market participants' income. Include the impact of externalities, public goods, and asymmetric information on the market outcomes.
8. Identify the difference between equity defined by the process using the symmetric property and equity defined by the Utilitarian viewpoint. In both cases, relate the differences in equity concepts to market outcomes with and without economic inefficiencies present.

Course Learning Objectives

1. Basic definitions and question studied in economics.
 - A. Define the economic problems of scarcity and opportunity costs.
 - B. Describe questions addressed in microeconomics and macroeconomics.
 - C. Differentiate between normative and positive economics.
 - D. Recognize how economic models use simplifying assumptions that allow for tractability of otherwise complex problems.
 - E. Use marginal analysis to explain some outcomes and predict the effects of changes to relevant factors involved in decision-making.
 - F. Describe how people who seek goals motivated by self-interest influences economic decisions.
2. Properties and Types of Goods
 - A. Based on the concepts of rivalry and excludability in relation to the properties of goods, define the four broad types of goods.

B. Identify real world examples of private goods, club goods, public goods and open access common-pool resources.

3. Private Goods – gains from trade and growth

A. Identify the role of enforceable property rights in market behavior.

B. Define comparative advantage, absolute advantage, and specialization, growth in production and economic growth.

C. Define and use the production possibilities frontier model (PPF) in a microeconomic and macroeconomic setting.

D. Explain how specialization, comparative advantage, and exchange can increase consumption possibilities of trading partners.

E. Identify determinants of economic growth, including physical and human capital, natural resources, and technology.

4. Individual choice – price taking behavior and demand

A. List market characteristics that make consumers price-takers.

B. Define marginal benefit, marginal cost, and net marginal benefit analysis.

C. State and apply the law of demand and its relation to consumers' rational decision-making process.

D. List, apply and illustrate the determinants of demand and distinguish between changes in demand and a change in quantity demanded

E. Define elasticity of demand and the factors that influence it.

F. Define cross-price elasticity of demand and income elasticity of demand.

G. Interpret demand elasticities, especially in relation to total expenditures.

5. Fundamentals of Game Theory – strategic decision making

A. Define the elements of non-cooperative game theory including defining a game, Nash equilibrium, dominant strategy, backward induction.

B. Describe types of games, including the differences between one-shot and repeated games.

C. Define the classic "prisoner's dilemma game" and the non-cooperative equilibrium.

D. Recognize the classic Bach or Stravinsky game and identify the pure-strategy Nash equilibria.

6. Decision making by the firm

A. Distinguish between economic costs and accounting costs.

B. Distinguish between short-run and long-run decisions.

C. Distinguish between the types of profit/loss situations a firm faces in the short-run and the long-run.

D. Explain why firms might operate at a loss in the short-run, but not in the long-run.

E. Illustrate the concept of profit maximization, marginal profits, and the logic of $MR=MC$.

- F. Illustrate how profit maximization motivates short-run and long-run decisions.
- G. Describe the key characteristics of markets that identify perfect competition, monopolistic competition, oligopoly, and monopoly.

7. Perfectly Competitive Markets

- A. Describe the characteristics of the market setting and using marginal analysis, describe the firm's optimal output and pricing decision as a price taker.
- B. Describe the law of supply in relation to MC, recognizing its justification in rational, marginal revenue-cost decision-making by firms.
- C. State and describe the law of supply and recognize its justification in rational, marginal revenue-cost decision making by firms based on increasing MC.
- D. List, apply, and illustrate the determinants of supply and distinguish between a change in supply versus a change in quantity supplied
- E. Define elasticity of supply and its determinants.
- F. Identify market equilibrium. Explain how shortages and surpluses are outcomes that move market price toward equilibrium.
- G. Illustrate and summarize how shifts in demand and/or supply affect the competitive equilibrium price and quantity.
- H. Identify the concepts of producer and consumer surplus as metrics of the gains from exchange.
- I. Use the competitive model to explain or predict the effects of real-world events of competitive market price and quantities of relevant goods and services.
- J. Predict the effects of a per-unit tax on prices, market quantities, economic incidence, and government revenues.
- K. Use the concepts of elasticity of demand and elasticity of supply to characterize the extent to which the tax will burden buyers or sellers.
- L. Predict the effects of a price controls on market quantities and economic wellbeing.
- M. Using marginal analysis, provide examples of how market interventions can have unintended consequences on consumer and firm behavior.

8. Monopoly and Monopolistic Competition

- A. Define and describe the characteristics of monopoly.
- B. Explain how economies of scale and/or legal barriers may create monopolies.
- C. Determine the profit maximizing condition of the single price monopoly firm.
- D. Define price discrimination, including perfect and imperfect. Explain how price discrimination can increase profit.
- E. Define and describe the characteristics of monopolistic competition.
- F. Determine the profit maximizing condition of the monopolistically competitive firm.
- G. Explain show how competition and entry of new firms affects the dynamics of this type of market, including competition through product differentiation.
- H. Describe the importance of advertising in the context of monopolistic competition.

9. Economic Efficiency

- A. Define and illustrate the concept of economic efficiency in the context of perfect competition.
- B. Explain how monopoly power can influence economic efficiency.
- C. Define the concept of externalities in production and consumption.
- D. Illustrate the impact externalities have on market outcomes, in their relation to society's socially efficient outcomes.
- E. Identify and provide examples of the free-rider problem as related to the provision of public goods.
- F. Identify and provide examples of the concept of the "tragedy of the commons" as related to the overuse of common-pool resources.
- G. Define equity by the process using the symmetric property and equity by the Utilitarian viewpoint.
- H. Relate the differences in equity concepts to market outcomes with and without economic inefficiencies present.

10. Information and economic efficiency

- A. Define asymmetric information, adverse selection, moral hazard and the principal agent problem.
- B. In a market setting, identify how adverse selection, moral hazard and the principal agent problems influence economy efficiency.
- C. Discuss ways in which governmental intervention may attenuate inefficiencies created by adverse selection and moral hazard.

11. Note-taking skills in an economics class

- A. Be able to take notes about a class lecture (or online sessions) and capture the main points discussed and presented.
- B. Be able to take notes from the textbook and be able to capture the main points discussed.
- C. Be able to form questions on various economic concepts that aid in your understanding.

Text and Required Resources

- IU eText: *Principles of Economics*, 9th edition. N. Gregory Mankiw
- Class Canvas Website: <https://iu.instructure.com/courses/1907539>. This Canvas class page is the primary mode of communication for all class information, exam information, homework, etc. You will need to visit the site regularly throughout the semester. You should be able to log on to the Canvas system by using your Indiana University's username and password. Once in the system you should see this class in your menu of classes. If you don't see this class in your menu, you should check with the Canvas help desk. Help desk contact information is found on the same webpage (if you just added the class, then give a day for the system to cycle).

Finishing an Incomplete

If you are trying to finish an incomplete grade from a previous semester by taking this course, you will need to see me. If there is room in the class and it is agreeable with the instructor that you received the incomplete form, I will allow you to complete your work in this class. I will need to add you to the Canvas roster and it is your responsibility to coordinate with your original instructor to ensure that your incomplete is removed from your transcript.

Course Organization

You are expected to have read the assigned material **prior** to each pre-recorded class lecture (which will be posted through Canvas) and should expect to work at least six hours per week outside the class. Please remember that the reading material and the pre-recorded class lecture are **NOT** substitutes for each other. After watching each pre-recorded class lecture, you should reconstruct your notes to understand the material. For each Thursday, we will meet by zoom and I will do a brief review of the content of the week but it is optional for you to attend. In addition, you are required to read and understand all material. You are responsible for all material presented both the texts as well as lecture, for an exam. You are responsible for all material presented both the texts as well as pre-recorded class lectures, for all activities, including exams.

Exams

- There are three in-term exams (Exam 1-3) and **one** final. Each in-term exam and final will contain two smaller “performance quizzes” administered through Canvas with a time window to complete.
- The examinations will be either multiple choice, fill-in-the-blank, drop down or graphical/numerical problems, or short essay questions, or any combination of these five.
- Exam 1 is worth 15%. Exam 2 and Exam 3 are worth 20% for the course grade, respectively. Since the methods of analysis for economics are cumulative, the exams are cumulative and **scheduled during class EST** on the following days:

Exam 1: Sept 7th (Quiz 1), Sept 21st (Quiz 2)

Exam 2: Oct 5th (Quiz 1), Oct 19th (Quiz 2)

Exam 3: Nov 2nd (Quiz 1), Nov 14th (Quiz 2)

For each performance quiz, I will set 14-hour window and you can finish it during the window with a time limit about 30 minutes (may vary among quizzes).

- The overall final exam is worth 25% for the course grade. It will consist of two parts that **cover all topics** taught in the course, more details on the administration of the quiz will come at the end of the semester:
 1. A departmental part of 20 multiple-choice questions that will be given in all sections. This will be administered as an online Canvas Quiz on **December 16**.

2. A section part provided by me, and it will cover all topics in the course. It will be administered as an online Canvas Quiz on **December 7th (Quiz 1) and December 14th (Quiz 2)**.

Attendance Quizzes

I will not set compulsory attendance point for the course, but for extra credit. There are 30 sets of graded Canvas Quiz questions worth 1.5% extra credits (0.05% for each quiz). You will earn these points by answering all the questions posted in the Canvas Quizzes for each pre-recorded class lecture. You will have 48 hours to complete the attendance questions for that day's recording to earn the one attendance point. For example, Tuesday attendance quizzes will open at 12:45pm (EST) and close Thursday at 12:44pm (EST). Thursday attendance quizzes will open at 12:45pm (EST) and close Saturday at 12:44pm (EST). There is **NO** makeup for the attendance quizzes.

Homework

The homework will take the form of online quizzes provided through Canvas. There will be 15 homework assignments (for each assignment, it is worth 0.75% for the course grade) due on at 11:59pm submitted online through Canvas worth 10% of the course grade. You may miss up to two quizzes without any penalty (I will give you 0.25% on the base, so if you finish 13 quizzes, the expected total score will be $13 \times 0.75\% + 0.25\% = 10\%$). However, if you complete all 15 quizzes you may earn up to 1.5% extra credit points. Late quizzes are not graded and receive a 0. There is **NO** makeup for each homework.

Economic Application Assignment

For better application of the knowledge learned from the course, there is an economic application assignment worth 10% of the course point. It will be in essay form and I will give you more details about it when it comes. The due is **December 14th 11:59pm**.

Makeup Policy

You must be able to take all quizzes/exams online.

Makeup Policy for Final Quiz/Exam

Only under extraordinary circumstance such as a documented medical emergency will I grant you permission for a make-up final quiz. If you miss the final quiz **without proper documentation or approval from me**, you will generally not be allowed to take a make-up final.

Under some circumstances, I may allow you to take a make-up final for non-document reasons. However, your make-up final will be worth only 90 % of the available points allocated to your final exam, if the reason is not properly documented.

If I give you permission for a make-up final quiz, you will receive an incomplete for the course and a make-up final will be administered to you in the next semester (spring 2021). You must contact me and sign (via email is fine) a removal of incomplete document to receive the incomplete or you will receive a zero on your final quiz.

If you do not take the final exam, you will receive a grade of zero for your final exam grade. It is university policy, generally, not to allow make-up finals unless there are extreme circumstances (oversleeping is not an extreme circumstance)—in other words **DO NOT** miss the final.

Makeup Policy for In-term Quizzes/Exams

If it is necessary to miss any exam due to medical or a non-medical reason that is outside of your control (other class workload, desired travel, job requirements, etc. are not considered outside of your control), you must contact me (prior to the exam if possible) via e-mail or phone if you are unable to access your email.

If you receive approval for a makeup in-term quiz/exam, you are required to complete the makeup exam within two weeks of date the exam was originally scheduled. It is your responsibility to make yourself available for the makeup quiz/exam. Coordinating details will be provided to you, when you receive approval from me.

Grading Scale: The final grade for the course is based on the percentage of the number of adjusted points you earned. There is no curve other than the scale below.

You should check your grade periodically throughout the semester.

	% of total
Homework	10%
Economic Application Assignment	10%
Exam 1	15%
Exam 2	20%
Exam 3	20%
Final	25%
Total	100%

Percentage Score Earned				Grade
<i>(Scores are rounded to the 2nd decimal place.)</i>				
	100.00%	down to	97.00%	A+
below	97.00%	down to	91.50%	A
below	91.50%	down to	89.00%	A-

below	89.00%	down to	85.50%	B+
below	85.50%	down to	81.50%	B
below	81.50%	down to	77.00%	B-
below	77.00%	down to	73.50%	C+
below	73.50%	down to	67.50%	C
below	67.50%	down to	66.50%	C-
below	66.50%	down to	63.50%	D+
below	63.50%	down to	59.50%	D
below	59.50%	down to	55.00%	D-
below	55.00%	down to	0.00%	F

Other Important Information

- A. If you desire testing accommodations for a disability, contact me outside of class to present the written supporting memorandum of accommodation from the Office of Disability Services for Students, <https://studentaffairs.indiana.edu/disability-services-students/>. Requests for accommodations for disability must be received and authorized by me in written form no less than two weeks in advance of need, in order to allow adequate time to review and make appropriate arrangements. No accommodation should be assumed until authorized by me.
- B. I follow the policy in the IU Academic Handbook with regard to cheating and academic dishonesty. A grade of zero will be given for any assignment or examination on which the student is guilty of cheating. The incident will be reported to the Dean of Student's Office.
- C. The last day to withdraw from the class and receive an automatic "W" is **Sunday, October 25, 2020**. This is also the last day to get a withdrawal slip signed without a special petition. After this date, you can obtain a late withdrawal from a course only by first receiving special permission from the dean of the college. Such permission is VERY difficult to get. University rules specify that permission for late withdrawals is "given only for urgent reasons relating to extended illness or equivalent distress" to a student who is "passing the course on the date of withdrawal."

Additional Student Notices from the University

Code of Student Rights, Responsibilities and Conduct: <http://www.iu.edu/~code/>.

Academic Integrity: As a student at IU, you are expected to adhere to the standards detailed in the *[Code of Student Rights, Responsibilities, and Conduct](#)* (Code). Academic misconduct is defined as any activity that tends to undermine the academic integrity of the institution. Violations include cheating, fabrication, plagiarism, interference, violation of course rules, and facilitating academic dishonesty. When you submit an assignment with your name on it, you are signifying that the work

contained therein is yours, unless otherwise cited or referenced. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged. All suspected violations of the *Code* will be reported to the Dean of Students and handled according to University policies. Sanctions for academic misconduct may include a failing grade on the assignment, reduction in your final course grade, and a failing grade in the course, among other possibilities. If you are unsure about the expectations for completing an assignment or taking a test or exam, be sure to seek clarification from your instructor in advance.

- When **emailing** please remember that that email is a means of communication and you should be always be respectful in your writings. Once you send the email, it is too late.
- **University Policy:** As a student at IU, you are expected to adhere to the standards detailed in the Code of Student Rights, Responsibilities, and Conduct (Code). Academic misconduct is defined as any activity that tends to undermine the academic integrity of the institution. Violations include cheating, fabrication, plagiarism, interference, violation of course rules, and facilitating academic dishonesty. When you submit an assignment with your name on it, you are signifying that the work contained therein is yours, unless otherwise cited or referenced. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged. All suspected violations of the Code will be reported to the Dean of Students and handled according to University policies. Sanctions for academic misconduct may include a failing grade on the assignment, reduction in your final course grade, and a failing grade in the course, among other possibilities. If you are unsure about the expectations for completing an assignment or taking a test or exam, be sure to seek clarification from your instructor in advance.
- **University Note Selling Policy:** Several commercial services have approached students regarding selling class notes/study guides to their classmates. Selling the instructor's notes/study guides in this course is not permitted. Violations of this policy will be reported to the Dean of Students as academic misconduct (violation of course rules). Sanctions for academic misconduct may include a failing grade on the assignment for which the notes/study guides are being sold, a reduction in your final course grade, or a failing grade in the course, among other possibilities. Additionally, you should know that selling a faculty member's notes/study guides individually or on behalf of one of these services using IU email, or via Canvas may also constitute a violation of IU information technology and IU intellectual property policies; additional consequences may result.
- **Online Course Materials:** The faculty member teaching this course holds the exclusive right to distribute, modify, post, and reproduce course materials, including all written materials, study guides, lectures, assignments, exercises, and exams. While you are permitted to take notes on the online materials and lectures posted for this course for your personal use, you are not permitted to re-post in another forum, distribute, or reproduce content from this course without the express written permission of the faculty member. Any violation of this course rule will be reported to the appropriate university offices and officials, including to the Dean of Students as academic misconduct.

Emergencies: To report an emergency, call the IU Police Department at 9-911 from any campus phone or (812) 855-4111 from off campus. For information about campus emergency preparedness: <http://protect.iu.edu/emergency>.

Counseling and Psychological Services. For information about services offered to students by CAPS: <http://healthcenter.indiana.edu/counseling/index.shtml>.

Students needing additional financial or other assistance. The Student Advocates Office can help students work through personal and academic problems as well as financial difficulties and concerns in order to help students progress towards earning a degree. The Office also provides support and assistance to students in working through grade appeals and withdrawals from all classes. In addition to advising student on appeal and financial issues such as financial aid or tuition, they also have emergency funds for IU students experiencing emergency financial crisis <https://studentaffairs.indiana.edu/student-advocates/>.

Bias-Based Incident Reporting: As your instructor, one of my responsibilities is to create a positive learning environment for all students. Bias incidents (events or comments that target an individual or group based on age, color, religion, disability, race, ethnicity, national origin, sex, gender, gender identity, sexual orientation, marital status or veteran status) are not appropriate in our classroom or on campus. What should you do if you witness or experience a bias incident? See it? Hear it? Report it by calling the Dean of Students Office (812-855-8187).

Sexual Misconduct and Title IX: As your instructor, one of my responsibilities is to create a positive learning environment for all students. Title IX and IU's Sexual Misconduct Policy prohibit sexual misconduct in any form, including sexual harassment, sexual assault, stalking, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to speak to someone confidentially, you can make an appointment with:

The Sexual Assault Crisis Services (SACS) at (812) 855-8900 (counseling services)
Confidential Victim Advocates (CVA) at (812) 856-2469 (advocacy and advice services)
IU Health Center at (812) 855-4011 (health and medical services)

It is also important that you know that Title IX and University policy require me to share any information brought to my attention about potential sexual misconduct, with the campus Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken and resources are made available. Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University can respond and assist.

I encourage you to visit <http://stopsexualviolence.iu.edu/> to learn more.