



Economics

COLLEGE OF LIBERAL ARTS &amp; SCIENCES

## ECON 513: International Trade

Autumn 2025

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**Instructor:** Marcos Sorá.**Email:** msora@illinois.edu.**Lecture:** Mondays/Wednesdays, 3:30-4:50pm 215B David Kinley Hall.**Office Hours:** Tuesdays, 11am-12pm, Office 0109.**Required Prerequisites:** ECON 302 and ECON 303, or equivalent. MSPE Graduate Student Standing.**Course Page:** Canvas.

### Overview

This course introduces students to the core theories of why countries trade and how trade affects households and firms. We will study a range of foundational models and use them to explain key empirical patterns in trade and to evaluate the effectiveness of trade policies such as tariffs and quotas. Familiarity with fundamental concepts in econometrics and causal inference is expected during classes that focus on empirical studies.

### Main Textbook

- Krugman, Melitz, Obstfeld, *International Economics: Theory and Policy*, P. Krugman, Obstfeld, and M. Melitz 2022 (KMO)

### Learning Outcomes

This course will equip you to navigate the world of international economics — whether as a practitioner, a policy-maker, or an informed citizen — by developing a solid foundation in economic principles. Through the two problem sets, you will gain hands-on experience working with international trade data, learn to support your claims with empirical evidence, and explore emerging trends in the global economy.

### Grading Breakdown

Your final grade will be the higher of the two following calculations:

$$\text{Numeric Grade} = \max \begin{cases} 30\% \times \text{PS} + 35\% \times \text{Midterm} + 35\% \times \text{Final}, \\ 30\% \times \text{PS} + 10\% \times \text{Midterm} + 60\% \times \text{Final}. \end{cases}$$

Think of the Midterm as an insurance.

Letter grades will be determined using a curve, which means your grade depends not just on your raw score but also on relative performance. This acknowledges that exams may vary in difficulty.

## Problem Sets

- **Two problem sets**, focused on empirical analysis and coding.
- **AI policy:** You may use AI tools to help write code, but you must fully understand it. Do *not* include any explanatory comments in the submitted code.
- **Groups:** Work in pairs or groups of three (one submission per group).
- **In-class code check (10%):** 10% of each problem set grade comes from a *10-minute, in-person code explanation* held in the class immediately after the due date. I will print each student's code; each student must explain what each part of their code does without external aids. Code with printed explanations will not receive full credit.
- **Submission:** Submit a single PDF on Canvas. See due dates below.
- **Regrades:** Regrade requests trigger a full re-evaluation and may raise or lower the score.

## Exams

- **Midterm:** TBA.
- **Final Exam:** 7:00pm-10:00pm., Monday Dec. 15.<sup>1</sup>
- If Midterm is missed: Final counts for 70%.

## Email Policy

- Include "ECON 513" in the subject line.
- No PS questions answered after 6pm the day before it's due.

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<sup>1</sup>This is determined at the University level. See the final exam policy website if you have questions: <https://studentcode.illinois.edu/article3/part2/3-201/>.

## Course Schedule (subject to change)

Week	Date	Topic
1	Aug 25/Aug 27	Introduction and Overview/Minimalistic Gains from Trade
2	Sep 3	Ricardo's Model of Comparative Advantage: Theory
3	Sep 8/Sep10	Ricardo's Model of Comparative Advantage: Evidence
4	Sep 15/Sep 17	Heckscher-Ohlin's Theory of Trade: Theory
<b>Problem Set 1</b>		
5	Sep 22/Sep 24	Heckscher-Ohlin's Theory of Trade: Evidence
6	Sep 29/Oct 1	Distributional Effects of Trade
7	Oct 6/Oct 8	<b>Midterm Exam</b> / Intra-Industry Trade
8	Oct 13/Oct 15	Intra-Industry Trade
9	Oct 20/Oct 22	Firms in the Global Economy
10	Oct 27/Oct 29	Multinationals
11	Nov 3/Nov 5	Trade Policy: Theory
<b>Problem Set 2</b>		
12	Nov 10/Nov 12	Trade Policy: The Empirical Evidence
13	Nov 17/Nov 19	The Global Trading System
14	Nov 24/Nov 26	Fall Break
15	Dec 1/Dec 3	Trade, Growth, and Industrial Policy
16	Dec 8/Dec 10	Trade and the Environment

## Detailed Course Outline

### Week 1: Overview of International Trade

As tariffs and other barriers declined, global trade expanded and now totals  $\approx 25\%$  of world GDP. Flows are largest between big economies that are close in distance (“gravity”).

**Key concepts:** waves of globalization, gravity.

#### Required Readings

- KMO Chapter 2

#### Optional Readings

- Paul R. Krugman, Richard N. Cooper, and T. N. Srinivasan (1995). “Growing World Trade: Causes and Consequences”. In: *Brookings Papers on Economic Activity* 1, pp. 327–377
- Richard E. Baldwin and Philippe Martin (June 1999). *Two Waves of Globalisation: Superficial Similarities, Fundamental Differences*. Working Paper w6904. Revised May 15, 2022. Available at SSRN: <https://ssrn.com/abstract=147244>. National Bureau of Economic Research
- Gordon H. Hanson (May 2012). “The Rise of Middle Kingdoms: Emerging Economies in Global Trade”. In: *Journal of Economic Perspectives* 26.2, pp. 41–64

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### Week 1: Gains From Trade in an Endowment Economy

**Key concepts:** Pareto improvement, Pareto efficiency.

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### Weeks 2 & 3: Ricardo’s Model of Comparative Advantage

With cross-country differences in *relative* productivity, specialization by comparative advantage raises consumption possibilities for both countries, even if one has absolute advantage in every good.

**Key concepts:** Comparative advantage, unit-labor costs, specialization.

#### Required Readings

- KMO Chapter 3

### Optional Readings

- R. Dornbusch, S. Fischer, and P. A. Samuelson (1977). "Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods". In: *American Economic Review* 67.5, pp. 823–839
  - Daniel M. Bernhofen and John C. Brown (2004). "A Direct Test of the Theory of Comparative Advantage: The Case of Japan". In: *Journal of Political Economy* 112.1, pp. 48–67
  - Arnaud Costinot, Dave Donaldson, and Ivana Komunjer (Sept. 2011). "What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas". In: *The Review of Economic Studies* 79.2, pp. 581–608
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### Weeks 4 & 5: Heckscher-Ohlin's Theory of Trade

Technological differences are not the only rationale for trade. If *relative* factor endowments differ (say one country has abundant land, while another has a large workforce), countries tend to export goods that use intensively their abundant factor.

**Key concepts:** Factor abundance, factor intensity, factor price equalization.

### Required Readings

- KMO Chapter 5.

### Optional Readings

- Wolfgang F. Stolper and Paul A. Samuelson (1941). "Protection and Real Wages". In: *Review of Economic Studies* 9.1, pp. 58–73
  - John Romalis (Mar. 2004). "Factor Proportions and the Structure of Commodity Trade". In: *American Economic Review* 94.1, pp. 67–97
  - Gordon H. Hanson (May 2012). "The Rise of Middle Kingdoms: Emerging Economies in Global Trade". In: *Journal of Economic Perspectives* 26.2, pp. 41–64
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### Week 6: Distributional Effects of Trade

Within Heckscher-Ohling's theory, trade increases the real return to relatively abundant factors and decreases the return to the scarce factor. To study short run consequence of trade we develop the specif-factors model. In the short run, some factors are *sector-specific* (e.g., tied by geography) while others are mobile: trade benefits factors specific to export sectors and harms factors specific to import-competing sectors.

**Key concepts:** Specific factors, mobile factors, rents.

### Required Readings

- KMO Chapter 4.
- David H. Autor, David Dorn, and Gordon H. Hanson (2016). “The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade”. In: *Annual Review of Economics* 8, Volume 8, 2016, pp. 205–240

### Optional Readings

- David H. Autor, David Dorn, and Gordon H. Hanson (Oct. 2013). “The China Syndrome: Local Labor Market Effects of Import Competition in the United States”. In: *American Economic Review* 103.6, pp. 2121–68
- Rafael Dix-Carneiro and Brian K. Kovak (Oct. 2017). “Trade Liberalization and Regional Dynamics”. In: *American Economic Review* 107.10, pp. 2908–46
- Stefanie Stantcheva (2023). “Understanding Economic Policies: What Do People Know and Learn?” Working paper, Harvard University

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## Week 7 & 8: Intra-Industry Trade

Trade can arise among perfectly identical countries if sectors are subject to increasing returns to scale and consumers value variety.

**Key concepts:** External economies of scale, love for variety.

### Required Readings

- KMO Chapter 7.

### Optional Readings

- Paul R. Krugman (1979). “Increasing Returns, Monopolistic Competition, and International Trade”. In: *Journal of International Economics* 9.4, pp. 469–479
- Paul R. Krugman (1980). “Scale Economies, Product Differentiation, and the Pattern of Trade”. In: *American Economic Review* 70.5, pp. 950–959

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## Week 9: Firms in the Global Economy

A regularity that holds true in many countries and across sectors is that only few firms export, and these are typically the most productive firms. We develop a model in which

firms need to pay a fixed cost of exporting to rationalize this fact. The model also shows that trade leads to a selection effect: when exporting firms grow, they drive low-productivity firms out of the market.

**Key concepts:** Internal economies of scale, fixed costs of exporting.

### Required Readings

- KMO Chapter 8.
- Andrew B. Bernard and J. Bradford Jensen (1999). "Exceptional exporter performance: cause, effect, or both?" In: *Journal of International Economics* 47.1, pp. 1–25

### Optional Readings

- Marc J. Melitz (2003). "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity". In: *Econometrica* 71.6, pp. 1695–1725
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## Week 10: Multinationals

A large share of world trade happens between establishments of multinational firms. When deciding to become a multinational and set up foreign subsidiaries (instead of serving foreign demand through exporting), headquarters trade off proximity (saving on trade costs) with concentration of production in the same location, which tends to be more efficient.

**Key concepts:** Proximity-concentration tradeoff.

### Required Readings

- KMO Chapter 8.

### Optional Readings

- Elhanan Helpman, Marc J. Melitz, and Stephen R. Yeaple (2004). "Export versus FDI with Heterogeneous Firms". In: *The American Economic Review* 94.1, pp. 300–316
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## Week 11: Trade Policy (Theory)

### Required Readings

- KMO Chapter 9.
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## Week 12: Trade Policy (Empirical Evidence)

### Required Readings

- Mary Amiti, Stephen J. Redding, and David E. Weinstein (2019). “The Impact of the 2018 Trade War on U.S. Prices and Welfare”. In: *Journal of Economic Perspectives* 33.4, pp. 187–210
  - Alberto Cavallo et al. (Mar. 2021). “Tariff Pass-Through at the Border and at the Store: Evidence from US Trade Policy”. In: *American Economic Review: Insights* 3.1, pp. 19–34
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## Week 13: The Global Trading System

Large countries can use import tariffs to depress the world price of what they buy—exploiting market power and improving their terms of trade. This terms-of-trade externality leads to retaliation and convergence towards a high-tariff Nash outcome. Multilateral rules (GATT/WTO) bind tariffs and enforce reciprocity to avoid it.

**Key concepts:** terms-of-trade effects, retaliation, multiple equilibria, reciprocity.

### Required Readings

- KMO Chapter 10.
- “The WTO is in Trouble. Econ 101 to the rescue?” **Trade Talks**, episode 180, March 12 2023 (available on Spotify).

### Optional Readings

- Jagdish Bhagwati (1992). “Regionalism versus Multilateralism”. In: *The World Economy* 15.5, pp. 535–556
  - Kyle Bagwell and Robert W. Staiger (Mar. 1999). “An Economic Theory of GATT”. in: *American Economic Review* 89.1, pp. 215–248
  - Richard Baldwin (Feb. 2016). “The World Trade Organization and the Future of Multilateralism”. In: *Journal of Economic Perspectives* 30.1, pp. 95–116
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## Week 15: Trade, Growth, and Industrial Policy

When production in certain sector leads to positive externalities, and these sectors are negatively affected by trade, the static and dynamic gains from trade may differ. This provides a rationale for industrial policy.

**Key concepts:** dynamic gains from trade, learning-by-doing.



**Required Readings**

- KMO Chapter 11.

**Optional Readings**

- Kevin M. Murphy, Andrei Shleifer, and Robert W. Vishny (1989). "Industrialization and the Big Push". In: *Journal of Political Economy* 97.5, pp. 1003–1026
  - Kiminori Matsuyama (1992). "Agricultural Productivity, Comparative Advantage, and Economic Growth". In: *Journal of Economic Theory* 58.2, pp. 317–334
  - Paula Bustos (Feb. 2011). "Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms". In: *American Economic Review* 101.1, pp. 304–40
  - David Atkin, Amit K. Khandelwal, and Adam Osman (Feb. 2017). "Exporting and Firm Performance: Evidence from a Randomized Experiment\*". In: *The Quarterly Journal of Economics* 132.2, pp. 551–615
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**Week 16: Trade and the Environment**

Carbon taxes helps fight climate change, but if one country taxes carbon emissions unilaterally production will move to other countries, without necessarily improving the environment. Border adjustments (equivalent to tariffs) and climate clubs can work to prevent leakage.

**Optional Readings**

- Brian R. Copeland and M. Scott Taylor (Mar. 2004). "Trade, Growth, and the Environment". In: *Journal of Economic Literature* 42.1, pp. 7–71.
- William Nordhaus (Apr. 2015). "Climate Clubs: Overcoming Free-Riding in International Climate Policy". In: *American Economic Review* 105.4, pp. 1339–70
- Arik Levinson (Sept. 2023). "Are Developed Countries Outsourcing Pollution?" In: *Journal of Economic Perspectives* 37.3, pp. 87–110

## Academic Assistance

Students are encouraged to utilize the many resources we have throughout campus to assist with academics and visit the Connie Frank CARE Center. We recommend that you seek them out starting early in the semester, not just in times of academic need, in order to develop good study habits and submit work which represents your full academic potential. Many resources are found on the Economics Website including details about the Economics Tutoring Center, Academic Advising, and other academic support options:

<https://economics.illinois.edu/academics/undergraduate-program/academic-stu>

## Academic Integrity

According to the Student Code, “It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions.” Please know that it is my responsibility as an instructor to uphold the academic integrity policy of the University, which can be found here: <https://studentcode.illinois.edu/article1/part4>

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policies. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity. Read the full Student Code at <https://studentcode.illinois.edu/>.

## Students with Disabilities

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES you may visit 1207 S. Oak St., Champaign, call 333-4603 (V/TTY), or e-mail a message to [disability@illinois.edu](mailto:disability@illinois.edu). DRES Website: <http://www.disability.illinois.edu/>.

## Connie Frank CARE Center / Community of Care

As members of the Illinois community, we each have a responsibility to express care and concern for one another. If you come across a classmate whose behavior concerns you, whether in regards to their well-being or yours, we encourage you to refer this behavior to the Connie Frank CARE Center (217-333-0050 or <http://odos.illinois.edu/community-of-care/referral/>). Based on your report, the staff in the Connie Frank CARE Center reaches out to students to make sure they have the support they need to be healthy and safe. Further, we understand the impact that struggles with mental health can have on your experience at Illinois. Significant stress, strained

relationships, anxiety, excessive worry, alcohol/drug problems, a loss of motivation, or problems with eating and/or sleeping can all interfere with optimal academic performance. We encourage all students to reach out to talk with someone, and we want to make sure you are aware that you can access mental health support at the Counseling Center (<https://counselingcenter.illinois.edu/>) or McKinley Health Center (<https://mckinley.illinois.edu/>).

For mental health emergencies, you can call 911 or walk into the Counseling Center, no appointment needed.

## Disruptive Behavior

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office for Student Conflict Resolution for disciplinary action.

## Emergency Response Recommendations

Emergency response recommendations can be found at the following website: <https://police.illinois.edu/em/planning/>. I encourage you to review this website and the campus building floor plans website within the first 10 days of class: <https://police.illinois.edu/em/building-emergency-action-plans/>.

## Religious Observances

The Religious Observance Accommodation Request form is available at <https://odos.illinois.edu/community-of-care/resources/students/religious-observances/>. Submit the form to the instructor and to the Office of the Dean of Students ([helpdean@illinois.edu](mailto:helpdean@illinois.edu)) as soon as possible.

## Family Educational Rights and Privacy Act (FERPA)

Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. See <http://registrar.illinois.edu/ferpa> for more information on FERPA. Student information and records will not be released to anyone other than the student unless the student has provided written approval or as required by law.

## Sexual Misconduct Reporting Obligation

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options. A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: <http://www.wecare.illinois.edu/resources/students/#confidential>.

Other information about resources and reporting is available here: <http://wecare.illinois.edu/>.

## Student Support

The Counseling Center is committed to providing a range of services intended to help students develop improved coping skills in order to address emotional, interpersonal, and academic concerns. Please visit their website to find valuable resources and services: <https://counselingcenter.illinois.edu/>.

**Counseling Center Information:** 217-333-3704

**Location:** Room 206, Student Services Building (610 East John Street, Champaign IL)

**McKinley Mental Health Information:** 217-333-2705

**Location:** 3rd Floor, McKinley Health Center, 1109 South Lincoln, Urbana, IL

**Emergency Dean:** The Emergency Dean may be reached at (217) 333-0050 and supports students who are experiencing an emergency situation after 5 pm, in which an immediate University response is needed and which cannot wait until the next business day. The Emergency Dean is not a substitute for trained emergency personnel such as 911, Police or Fire. If you are experiencing a life threatening emergency, call 911. Please review the Emergency Dean procedures: <https://odos.illinois.edu/community-of-care/emergency-dean>.

## Academic Dates and Deadlines

Students should make note of important academic deadlines for making changes to their courses (add, drop, credit/no-credit, grade replacement, etc.). <https://registrar.illinois.edu/academic-calendars>

Please check with your academic department regarding specific procedures and policies.