

## **ECON 5440: INTERNATIONAL TRADE**

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### **Description**

This is a graduate level course on advanced international trade. We take both theoretical and empirical approaches to the analysis of trade and foreign direct investment. We will begin with traditional trade theories. Then we will turn to models of monopolistic competition and models with firm heterogeneity. In the final part, we will discuss selected topics including multinational production, firm productivity and the impacts of trade on labor market.

### **Learning Outcomes**

After completing this course, students are expected to:

- Understand the main advanced economic theories of international trade.
- Apply the theories and conduct empirical analysis of international trade.
- Develop skills for independent research in international trade.

### **Course Website**

Syllabus, problem sets, lecture slides, and the readings will be available on the course website through *Blackboard*.

## Required Textbooks

- Feenstra (2016) *Advanced International Trade: Theory and Evidence*, Second Edition, Princeton University Press.
- Allen and Arkolakis (2016) *Elements of Advanced International Trade*, Manuscript, <https://arkolakis.com/wp-content/uploads/ClassNotes.pdf>.

## Recommended Books

- Dixit and Norman (1980) *Theory of International Trade*, Cambridge University Press.
- Helpman and Krugman (1985) *Market Structure and Foreign Trade*, MIT Press.
- Eaton and Kortum (2010) *Technology in the Global Economy: A Framework for Quantitative Analysis*, Manuscript.
- Antràs (2016) *Global Production: Firms, Contracts and Trade Structure*, Princeton University Press.
- Helpman (2018) *Globalization and Inequality*, Harvard University Press.
- Irwin (2020) *Free Trade under Fire*, Fifth Edition, Princeton University Press.

## Grading

Your overall performance will be determined by:

- (10%) Attendance and participation.
- (30%) Problem sets.
- (60%) Final exam.

# Course Outline and Reading List

## 1. Introduction: Course Overview, Stylized Facts and Basic Tools

- Allen and Arkolakis (2016), Section 3.1.
- Dixit and Stiglitz (1977) "Monopolistic Competition and Optimum Product Diversity," *American Economic Review*.

## 2. Heckscher-Ohlin Model: Factor Endowment Differences

- Feenstra (2016) Ch. 1-2.
- Allen and Arkolakis (2016), Ch. 2.
- Trefler (1995) "The Case of the Missing Trade and Other Mysteries," *American Economic Review*.
- Davis and Weinstein (2001) "An Account of Global Factor Trade," *American Economic Review*.

## 3. Armington Model and Gravity

- Feenstra (2016) Ch. 5.
- Allen and Arkolakis (2016), Section 3.2 and 3.3.
- McCallum (1995) "National Borders Matter: Canada-U.S. Regional Trade Patterns," *American Economic Review*.
- Anderson and van Wincoop (2003) "Gravity with Gravitas," *American Economic Review*.
- Keith and Mayer (2014) "Gravity Equations: Workhorse, Toolkit, Cookbook," *Handbook of International Economics* Vol. 4.

## 4. Krugman Model: Monopolistic Competition with Homogeneous Firms

- Feenstra (2016) Ch. 5.

- Allen and Arkolakis (2016), Section 3.4.
- Krugman (1979) "Increasing Returns, Monopolistic Competition, and International Trade," *Journal of International Economics*.
- Krugman (1980) "Scale Economies, Product Differentiation, and the Pattern of Trade," *American Economic Review*.

## 5. Melitz Model: Monopolistic Competition with Heterogeneous Firms

- Feenstra (2016), Ch. 6.
- Allen and Arkolakis (2016), Section 4.5.
- Melitz (2003) "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," *Econometrica*.
- Bernard, Eaton, Jensen and Kortum (2003) "Plants and Productivity in International Trade," *American Economic Review*.
- Chaney (2008) "Distorted Gravity: The Intensive and Extensive Margins of International Trade," *American Economic Review*.
- Melitz and Ottaviano (2008) "Market Size, Trade, and Productivity," *Review of Economic Studies*.
- Arkolakis (2010) "Market Penetration Costs and the New Consumers Margin in International Trade," *Journal of Political Economy*.
- Arkolakis, Costinot and Rodríguez-Clare (2012) "New Trade Models, Same Old Gains?" *American Economic Review*.
- Melitz and Redding (2014) "Heterogeneous Firms and Trade," *Handbook of International Economics* Vol. 4.
- Tang and Zhang (2014) "Factor Intensity, Product Switching and Productivity: Evidence from Chinese Exporters," *Journal of International Economics*.

## 6. Dornbusch-Fischer-Samuelson Model: Deterministic Ricardian Theory

- Feenstra (2016), Ch. 3.

- Allen and Arkolakis (2016), Section 3.5.
- Dornbusch, Fischer and Samuelson (1977) "Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods," *American Economic Review*.

## 7. Eaton-Kortum Model: Probabilistic Ricardian Theory

- Allen and Arkolakis (2016), Section 4.2, 4.3, 4.4, 5.1, 6.4 and 6.5.
- Eaton and Kortum (2002) "Technology, Geography, and Trade," *Econometrica*.
- Dekle, Eaton and Kortum (2007) "Unbalanced Trade," *American Economic Review*.
- Allen and Arkolakis (2014) "Trade and the Topography of the Spatial Economy," *Quarterly Journal of Economics*.
- Costinot and Rodríguez-Clare (2014) "Trade Theory with Numbers: Quantifying the Consequences of Globalization," *Handbook of International Economics* Vol. 4.
- Caliendo and Parro (2015) "Estimates of the Trade and Welfare Effects of NAFTA," *Review of Economic Studies*.
- Donaldson (2018) "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure," *American Economic Review*.

## 8. FDI and Multinational Production

- Feenstra (2016), Ch. 12.
- Helpman (1984) "A Simple Theory of International Trade with Multinational Corporations," *Journal of Political Economy*.
- Antràs (2003) "Firms, Contracts, and Trade Structure," *Quarterly Journal of Economics*.
- Antràs and Helpman (2004) "Global Sourcing," *Journal of Political Economy*.
- Helpman, Melitz and Yeaple (2004) "Export versus FDI with Heterogeneous Firms," *American Economic Review*.
- Javorcik (2004) "Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers through Backward Linkages," *American Economic Review*.

- Ramondo and Rodriguez-Clare (2013) "Trade, Multinational Production, and the Gains from Openness," *Journal of Political Economy*.
- Antràs and Yeaple (2014) "Multinational Firms and the Structure of International Trade," *Handbook of International Economics* Vol. 4.
- Tang and Zhang (2021) "Do Multinationals Transfer Culture? Evidence on Female Employment in China," *Journal of International Economics*.

## 9. Trade and Labor Market: Theory and Empirics

- Feenstra (2016), Ch. 4.
- Feenstra and Hanson (1999) "The Impact of Outsourcing and High-technology Capital on Wages: Estimates for the United States, 1979-1990," *Quarterly Journal of Economics*.
- Grossman and Rossi-Hansberg (2008) "Trading Tasks: A Simple Theory of Offshoring," *American Economic Review*.
- Helpman, Itskhoki and Redding (2010) "Inequality and Unemployment in a Global Economy," *Econometrica*.
- Autor, Dorn and Hanson (2013) "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *American Economic Review*.
- Kovak (2013) "Regional Effects of Trade Reform: What Is the Correct Measure of Liberalization?" *American Economic Review*.
- Dix-Carneiro (2014) "Trade Liberalization and Labor Market Dynamics," *Econometrica*.
- Adao, Arkolakis and Esposito (2020) "General Equilibrium Effects in Space: Theory and Measurement," NBER Working Paper 25544.
- Dai, Huang and Zhang (2021) "How Do Households Adjust to Tariff Liberalization? Evidence from China's WTO Accession," *Journal of Development Economics*.
- Caliendo and Parro (2022) "Trade Policy," *Handbook of International Economics*, Vol. 5.

## 10. Trade and Firm Productivity: Measurement and Empirics

- Olley and Pakes (1996) "The Dynamics of Productivity in the Telecommunications Equipment Industry," *Econometrica*.
- Akerberg, Benkard, Berry and Pakes (2007) "Econometric Tools for Analyzing Market Outcomes," *Handbook of Econometrics* Vol. 6A.
- De Loecker and Warzynski (2012) "Markups and Firm-Level Export Status," *American Economic Review*.
- Akerberg, Caves and Frazer (2015) "Identification Properties of Recent Production Function Estimators," *Econometrica*.
- Brandt, Van Biesebroeck, Wang and Zhang (2017) "WTO Accession and Performance of Chinese Manufacturing Firms," *American Economic Review*.
- Gandhi, Navarro and Rivers (2020) "On the Identification of Gross Output Production Function," *Journal of Political Economy*.