

# Econ 4510-001: Advanced Topics in Trade and IO

Instructor: Jin Liu

Fall 2025

E-mail: [jl2714@princeton.edu](mailto:jl2714@princeton.edu)

Office Hours: TBA

Office: TBA

<https://sites.google.com/view/jinliusite>

Class Hours: M/W 10:15–11:45 AM

Class Room: TBA

---

## Course Overview

This course introduces tools for developing and estimating quantitative models in international trade and IO. The first part of the course covers foundational quantitative trade models that incorporate firm-level decision-making, including seminal papers such as Eaton and Kortum (2002), Melitz (2003), and Aw, Roberts, and Xu (2011).

The second part covers international and spatial models that analyze how firms make location choices, with applications such as the geographic expansion of bank branches in the U.S. and the placement of automobile production facilities along supply chains. This part involves a methodological module on applying combinatorial discrete choice problems and moment inequality approaches to solving and estimating firm decisions.

The final part of the course introduces recent developments in the literature on multinational firms, with an emphasis on their global sourcing strategies, export platforms, foreign direct investment (FDI), and innovation motives.

Throughout the course, the goal is to equip students with the skills to set up and estimate structural models that embed micro-level firm decisions and prepare them for independent research.

## Assessments

### Problem Sets

Students will complete three problem sets throughout the course. Collaboration is allowed for groups of up to two students.

### Research Proposal and Class Presentation

Each student will do a 20-minute presentation on an original research project at the end of the course and will write a 10-15 page draft describing the research idea in detail. Topics may be

broadly defined, as long as they connect to themes from the course.

## **Grading Policy**

Final grades will be based on the following components:

- 10% of your grade will be determined by class participation.
- 45% of your grade will be determined by the three problem sets.
- 45% of your grade will be determined by the class presentation and research proposal.

## **Course Outline and Readings**

There is no required textbook for the course. The following manuscripts are useful references:

J. Eaton and S. Kortum, Technology in the Global Economy: A Framework for Quantitative Analysis

R. Feenstra, Advanced International Trade: Theory and Evidence (2nd ed.), Princeton University Press.