

University of Colorado at Boulder
Fall Semester 2020

Econ 8433-001: Topics in International Economics

Lecture:	Mon., Wed. 01:55 PM - 03:10 PM
Instructor:	Dr. Sergey Nigai
Office:	ECON 10
Office Hours:	Mon. 9:30 AM - 11:30 AM (via Zoom)
Email :	sergey.nigai@colorado.edu

Course description and objectives:

This is a seminar on various topics in international economics. The course is a part of the graduate trade sequence and complements the course on international trade theory. Unlike the latter, this course will not include extensive review of the literature and instead will cover data, estimation, calibration, and solutions of several classes of modern quantitative models. Completion of ECON 8413 is not a prerequisite for this class. However, students planning to write their dissertation in international trade should take both.

The main objective of this course is to provide you with the tools necessary to find quantitative answers in international economics. This involves choosing the appropriate theoretical model, estimating its parameters, and designing quantitative experiments. By the end of the semester, I expect you to have completed a report containing the actual results you will derive. This report may eventually serve as the basis for one of the chapters of your dissertation. While the course is designed for students specializing in international trade, the tools learned in this course will have direct applications in other fields such as I.O., urban/regional economics, and others.

Course requirements:

The course will consist of lectures, discussions, problem sets, and presentations. Much of our time will be devoted to estimation and calibration methods, as well as designing counterfactual experiments. You should be prepared to learn how to use both MATLAB and STATA in producing your outputs. You will also need to use L^AT_EX for the report and presentations. I will provide brief introductions to the software and distribute sample codes.

During the semester you will make three presentations:

Introductory Presentation will include discussion of the proposed research question:

- { Why is it interesting?
- { What are the most closely related papers in the established literature? What are their drawbacks?
How are you planning to improve upon or add to the existing work?
- { What data/models are needed to approach the question?

{ What is the timeline of your research project?

Intermediate Presentation will include updates on your progress:

{ What data/models do you use to answer the research question?

{ What difficulties/issues have you encountered so far? How are you planning to address them?

Final Presentation will be a regular (though shorter than usual) paper presentation.

I will also assign several problem sets during the semester. These problem sets will reinforce your understanding of various quantitative approaches and ensure that you have multiple sample codes that can be used for your research projects in the future.

Grading:

Your final grade will be calculated as follows:

Participation:	10%
Problem Sets:	10%
Introductory Presentation:	10%
Intermediate Presentation:	10%
Final Presentation:	30%
Final Report:	30%

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- Head, K. and T. Mayer (2014), "Gravity Equations: Workhorse, Toolkit, and Cookbook", Chapter 3 in Gopinath, G, Helpman, E., and K. Rogo (eds.), *Handbook of International Economics*, Vol. 4.
- Egger, P.H. and S. Nigai (2015), Structural gravity with dummies only: Constrained ANOVA-type estimation of gravity models, *Journal of International Economics*, 97(1), 86-99.

Week 3: September 9: Mapping Models to the Data

- GGDC Productivity Level Database
- WITS, CEPII
- World Input-Output Database

Week 4: September 14, September 16: Designing Counterfactual Experiments in General Equilibrium

- Dekle, R., Eaton, J., and S. Kortum (2007), Unbalanced Trade, *American Economic Review*, 97(2), 351-355.
- Arkolakis C., Costinot, A., and A. Rodriguez-Clare (2012), New Trade Theories Same Old Gains?, *American Economic Review*, 102(1), 94-130.
- Costinot, A. and A. Rodriguez-Clare (2014), "Trade Theory with Numbers: Quantifying the Consequences of Globalization", Chapter 4 in Gopinath, G, E. Helpman and K. Rogo (eds.), *Handbook of International Economics*, Vol. 4.
- Allen and Arkolakis: Chapter 7

Week 5: September 21, September 23: Presentations (I) and Catch-up

Week 6: September 28, September 30: Heterogeneous Firms (I)

- Melitz, M. (2003), The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity, *Econometrica*, 71(6), 1695-1725.
- Arkolakis C., Demidova, S., Klenow, P., and A. Rodriguez-Clare (2008), Endogenous Variety and the Gains from Trade, *American Economic Review*, 98(2), 444-450.
- Chaney, T. (2008), Distorted Gravity: Heterogeneous Firms, Market Structure, and the Geography of International Trade, *American Economic Review*, 98(4), 1707-1721.

Week 7: October 5, October 7: Heterogeneous Firms (II)

- Melitz, M. and S. Redding (2014), "Heterogeneous Firms and Trade", Chapter 1 in Gopinath, G, E. Helpman and K. Rogo (eds.), *Handbook of International Economics*, Vol. 4.
- Allen and Arkolakis: Chapters 3-5

Week 8: October 12, October 14: Ricardian Models

- Eaton J. and S.Kortum (2002), Technology, Geography, and Trade, *Econometrica*, 70(5), 1741-1780.
- Allen and Arkolakis: Chapter 4-

Week 9: October 19, October 21:

ing environment in all instructional settings, whether in person, remote or online. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. For more information, see the policies on classroom behavior and the Student Code of Conduct.