

Quantitative Trade Models

Basics Georgetown University Qatar Spring 2020
ECON 442: Quantitative Trade Models

Class Location: LA 12 Lecture Times: 2:00-3:15pm (Su/Tu)
Course website: <http://rossbach.georgetown.domains/econ442.html>

Instructor Jack Rossbach Office hours: By Appointment
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Course Description This course will cover theoretical and quantitative aspects of international trade. The goal of the semester will be to learn how to solve modern trade models computationally and calibrate them using data in order to perform counterfactuals. We will start by briefly reviewing Ricardian trade theory before moving on to models featuring monopolistic competition and firm-level heterogeneity. We will review the trade gravity literature, familiarize ourselves with datasources for international trade flows, and discuss international trade agreements and optimal trade policy.

Assessment Methods **Short Assignments & Quizzes** **20%**
There will be several short Canvas assignments based off lectures. We will occasionally have in-class quizzes related to assignments or other material recently covered. Lowest quiz or assignment score will be dropped.

Problem Sets **25%**
Problem sets will be multi-part questions focusing on solving models or manipulating data and will typically require R, Stata, or Excel to complete.

Class Participation **5%**
Attendance and participation in in-class exercises.

Midterm **25%**
There will be a single midterm, with questions similar in style to the short assignments and quizzes. A study guide will be provided. Tentatively scheduled for Feb 25.

Final Report **25%**
Students will be asked to write a short report where they apply a model or data exercise from class to a question of their choice. Tentatively due April 25.

Grading Scale A-F with standard cutoffs: A = 93, A- = 90, B+ = 87, B = 83, B- = 80, C+ = 77, C = 73, C- = 70, D+ = 67, D = 63, D- = 60, F = Below 60.

Course Materials This course will not follow a specific textbook. Selected readings will be provided. Lecture notes and slides will be made available on the course website.

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Topics	<p>Preliminaries Gains from trade, comparative advantage, partial vs general equilibrium</p> <p>Introduction to Computational Model Solving Solving systems of equations, newtons method</p> <p>Trade Policy Free trade agreements, tariff and non-tariff barriers, political economy</p> <p>New Trade Theory Monopolistic competition, increasing returns to scale</p> <p>Heterogeneity Export decisions, multi-dimensional Ricardian models, the extensive margin</p> <p>Gravity Models Gravity regressions, welfare analysis, counterfactuals</p>
Course Goals	<p>Following the completion of this course students should</p> <ul style="list-style-type: none">-Understand modern and historic perspectives on international trade-Gain familiarity with data sources available for studying international trade flows-Be able to solve economic models of trade both analytically and computationally-Have the tools and knowledge to manipulate and interpret data through the lens of the economic models and theories studied in this course
Computation	<p>This course will involve a significant amount of computational work and data manipulation. Software used in this course will include Excel, Stata, and R. No prior experience with Stata or R is assumed or required.</p>
Additional Policies	<p>No late work will be accepted following the last day of weekly classes. The midterm exam will not be rescheduled. Students who miss the exam with an excused absence will have the other items weighted in place of the missed exam.</p>
Absences	<p>Four unexcused absences will lead to a one letter drop in your final grade. Every absence after that will lead to an additional grade deduction (e.g. B+ to B) https://qatar.sfs.georgetown.edu/programs/academic-affairs-policies</p>
Academic Integrity	<p>https://qatar.sfs.georgetown.edu/programs/honor-system/sfs-q-honor-system</p>
Title IX Information	<p>https://www.qatar.georgetown.edu/campus-life/title-ix</p>