

# USC Dornsife

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College of Letters, Arts  
and Sciences

**ECON 650 – International Trade Theory**  
**Spring 2022—Wednesday—2:00-5:20pm**

**Location:** VHE 206

**Instructor:** Professor Thomas Chaney

**Office:** Kaprielian 364B

**Office Hours:** Wednesdays 11am-12pm.

**Contact Info:** chaneyt@usc.edu

## Course Description

This course is an advanced course in International Trade. It is targeted at second year PhD students.

This course covers theoretical models of international trade (and beyond), specific data sources, and empirical methods.

The core of the class, about two thirds, will be centered around the unifying theme of the gravity equation:

- I will first present some empirical evidence of the prevalence of the gravity equation in inter- and intra-national trade, inter- and intra-national migrations, commuting within cities, international capital flows
- I will show how a gravity-type structure for bilateral exchanges can be derived through a variety of micro-foundations; each specific model aggregating into a gravity structure is useful on its own for a variety of applications, not just in international trade.
- I will show how to derive the aggregate properties of those models, as well as counterfactual predictions, for instance to quantify potential economic policies.
- I will show how to estimate gravity equations empirically, with a tight connection between the theory and empirical methods. I will describe the various empirical tools that have been developed to estimate a bilateral trade model, their pros and cons, ease of implementation, and computational challenges.
- I will apply both the theory and empirics of gravity to a variety of settings: international trade, intranational trade, international migrations, commuting patterns, labor markets, and show how to derive and estimate both static and dynamic models. For each application, the specific micro-foundations have to be adapted, the available data vary, the empirical estimation methods may vary, but the core methods (both theory and empirics) remain similar.

The second part of the class, about one third, will cover a variety of extensions. For this second part, I will follow the recommendations from the students, their taste, and adjust the content of the class accordingly. The topics covered will include (either all or a subset of) the following:

- The empirics of the impact of international trade on wage inequality.
- The construction, strength and weaknesses of specific identification strategies (e.g. shift-share design).
- Unconventional empirical applications (e.g. trade in ancient times, the impact of historical infrastructure, the social impacts of trade... etc).
- Innovation and trade.
- International migrations.
- International trade networks.
- Input-output production networks.
- The dynamics of firm sizes.
- Granularities in international trade.

- Multinational firms and multinational production.
- ... etc.

### **Learning Objectives**

The primary goal of this class is that students will have a deep and hands-on knowledge of the theoretical tools and empirical methods used in modern international trade. This knowledge can be applied to a variety of settings beyond trade. In that sense, students who do not plan to work in international trade for their PhD dissertation will acquire a useful toolbox, both theoretical and empirical tools, which should help them in their future research.

**Prerequisite(s):** 1<sup>st</sup> year PhD economics core classes (micro, macro, econometrics)

### **Course Notes**

I will upload lecture notes and slides on the course website:  
<https://sites.google.com/site/thomaschaney/teaching/trade>

### **Required Readings and Supplementary Materials**

There is no textbook for this class. We will cover published articles and working papers which are readily accessible to USC students.

### **Description and Assessment of Assignments**

The grade for this class will be based on the following assignments:

- In-class presentations: Each student will be required to present a paper (possibly a collection of papers) in class. Assignments will be done in the 3<sup>rd</sup> week of class. Each student will give a 40 minutes presentation of their assigned paper.
- Research proposal: Students are expected to write a research proposal, developing an original research idea for an empirical research project (the project can be purely theoretical, but it is typically harder to come up with original ideas when it comes to theory). The topic of the research proposal need not be in international trade, but ought to be at least loosely

### Grading Breakdown

Including the above detailed assignments, how will students be graded overall? Participation should be no more than 15%, unless justified for a higher amount. All must total 100%.

Assignment	Points	% of Grade
Student presentation		35
Research proposal		50
In class participation		15
<b>TOTAL</b>	<b>0</b>	<b>100</b>

### Grading Scale (Example)

Course final grades will be determined using the following scale

A	95-100
A-	90-94
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

## Course Schedule: A Weekly Breakdown

Provide a detailed course calendar that provides a thorough list of deliverables—readings, assignments, examinations, etc., broken down on at least a weekly basis. The format may vary, but the content must include:

- Subject matter (topic) or activity
- Required preparatory reading, or other assignments (i.e., viewing videos) for each class session, including page numbers.
- Assignments or deliverables.

### IMPORTANT:

In addition to in-class contact hours, all courses must also meet a minimum standard for out-of-class time, which accounts for time students spend on homework, readings, writing, and other academic activities. **For each unit of in-class contact time, the university expects two hours of out of class student work per week over a semester.**

(Please refer to the [Contact Hours Reference guide](#).)

	Topics/Daily Activities	Readings and Homework	Deliverable/ Due Dates
<b>Week 1</b>	Toolkit: Dixit-Stiglitz & Eaton-Kortum	<ul style="list-style-type: none"> <li>• Dixit Stiglitz AER 1977</li> <li>• Eaton Kortum ECMA 2002</li> <li>• Hsieh Klenow QJE 2009</li> </ul>	
<b>Week 2</b>	Gravity equation in international trade I: Armington and Krugman	<ul style="list-style-type: none"> <li>• Anderson Van Wincoop AER 2003</li> <li>• Krugman AER 1980</li> </ul>	
<b>Week 3</b>	Gravity equation in international trade II: Eaton-Kortum	<ul style="list-style-type: none"> <li>• Eaton Kortum ECMA 2002</li> <li>• Bernard Eaton Jensen Kortum AER 2003</li> </ul>	in-class student presentations start
<b>Week 4</b>	Gravity equation in international trade III: Melitz-Chaney	<ul style="list-style-type: none"> <li>• Melitz ECMA 2003</li> <li>• Chaney AER 2008</li> <li>• Arkolakis JPE 2010</li> <li>• Melitz Ottaviano REStud 2008</li> <li>• Atkeson Burstein AER 2008</li> </ul>	
<b>Week 5</b>	Estimation of a trade models	<ul style="list-style-type: none"> <li>• Head Mayer 2014 Handbook of International Economics</li> <li>• Santos Silva Tenreyro REStat 2006</li> <li>• Eaton Kortum Sotelo NBER 2012</li> <li>• Caliendo Parro REStud 2015</li> </ul>	
<b>Week 6</b>	The welfare gains from international trade: Theory and empirics	<ul style="list-style-type: none"> <li>• Arkolakis Costinot Rodriguez-Clare AER 2012</li> <li>• Delkle Eaton Kortum IMF 2008</li> </ul>	

		<ul style="list-style-type: none"> <li>Atkin Donaldson "Who's Getting Globalized?" WP 2022</li> </ul>	
<b>Week 7</b>	Economic geography		
<b>Week 8</b>	Dynamic migrations		research proposal preliminary draft due
<b>Week 9</b>	Dynamic labor markets		
<b>Week 10</b>	Within city commuting		
<b>Week 11</b>	Transportation infrastructure		
<b>Week 12</b>	The "China Shock"		revised research proposal draft due
<b>Week 13</b>	Shift-share estimation designs		
<b>Week 14</b>	Input-output networks		
<b>Week 15</b>	Unconventional applications		research proposal due
<b>FINAL</b>			Date: For the date and time of the final for this class, consult the USC <i>Schedule of Classes</i> at <a href="http://classes.usc.edu">classes.usc.edu</a> .

## Statement on Academic Conduct and Support Systems

### Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

### Support Systems:

*Student Counseling Services (SCS)* – (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. [engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

*National Suicide Prevention Lifeline* – 1 (800) 273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

*Relationship and Sexual Violence Prevention Services (RSVP)* – (213) 740-4900 – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. [engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: [sarc.usc.edu](http://sarc.usc.edu)

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. [equity.usc.edu](http://equity.usc.edu)

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. [studentaffairs.usc.edu/bias-assessment-response-support](http://studentaffairs.usc.edu/bias-assessment-response-support)

*The Office of Disability Services and Programs*

Provides certification for students with disabilities and helps arrange relevant accommodations. [dsp.usc.edu](http://dsp.usc.edu)

*Student Support and Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. [studentaffairs.usc.edu/ssa](http://studentaffairs.usc.edu/ssa)

*Diversity at USC*

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. [diversity.usc.edu](http://diversity.usc.edu)

*USC Emergency Information*

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. [emergency.usc.edu](http://emergency.usc.edu)

*USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.*

Provides overall safety to USC community. [dps.usc.edu](http://dps.usc.edu)