

**Course Outline for Economics 2300: International Trade**  
**Fall 2016**  
**Peter M. Morrow**  
**(This version: September 3<sup>rd</sup>, 2017)**

**Room and Time: GE 100, Thursdays 11am-1pm**

**Contact:** peter.morrow@utoronto.ca , 416-978-4375, Gluskin House, Room 336.

**Office Hours:** TBD.

**Email Policy**

I will do my best to respond to e-mail within 24 hours on a weekday, 48 hours on a weekend.

**Course Orientation**

This class will generally be taught at a mixed *M.A./Ph.D.* level. What does this mean? The class will have three general goals. First, we will work to develop an understanding of the mathematical models that the economics profession has chosen to use to understand the theoretical structure of international trade. There will be a mix of the classical models that serve as the theoretical foundation of the field as well as more recent updates to that foundation. Second, we will cover empirical work that codetermines the path that theoretical research follows. Third, I will introduce recent contributions to both the theory and empirics of international trade to show you “cutting edge” research. Further exploration of more modern approaches will be conducted in the winter term with Daniel Trefler.

**Updating of the syllabus**

This draft represents my best guess/ambition for the papers I want to cover this semester. If the past is any lesson, this will likely change such that I will update the readings as we progress. Please refer to the date at the top of this document for the most recent version of the syllabus. The version posted on Blackboard will always be the “right” version.

**Textbooks**

Although there are no required books for this class, there are some that are recommended (\*) if you specialize in international trade. These are easily available on Amazon or any other online vendor.

\*Dixit, A.K. and V. Norman, *Theory of International Trade: A Dual, General Equilibrium Approach*, Cambridge: Cambridge University Press, 1980 (“DN” below)

\*Feenstra, Robert C., *Advanced International Trade: Theory and Evidence*, Princeton: Princeton University Press, 2004 (“F” below)

\*Helpman, E. and P.R. Krugman, *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*, Cambridge: MIT Press, 1985. (“HK” below)

\*Handbook of International Economics, (2014), edited by Gita Gopinath, Elhanan Helpman and Kenneth Rogoff

Handbook of International Economics, (2003), edited by E. Kwan Choi and James Harrigan

Handbook of International Economics, (1995), edited by G.M. Grossman and Kenneth Rogoff

Handbook of International Economics, (1984), edited by R.W. Jones and P.B. Kenen

In addition, if you are uncertain about your familiarity with the microeconomics needed for this course, please reference

Varian, H., *Microeconomic Analysis*, 3<sup>rd</sup> edition, New York: W.W. Norton 1992.

Mas-Colel, Andreu and Michael D. Whinston and Jerry Green, *Microeconomic Theory*, 1<sup>st</sup> edition, New York: Oxford University Press (1995).

Given the attention that will be paid to empirical analysis in this class, you should have some idea of the data that is publicly available

1) Robert Feenstra (and collaborators) have assembled extensive data covering world trade and U.S. imports at varying levels of aggregation across a number of decades. This data is available at [www.internationaldata.org](http://www.internationaldata.org) and also at [www.nber.org/data](http://www.nber.org/data). In addition, researchers at CEPII in Paris have compiled more detailed data which they have made available at [http://www.cepii.fr/cepii/en/bdd\\_modele/presentation.asp?id=1](http://www.cepii.fr/cepii/en/bdd_modele/presentation.asp?id=1)

2) Robert Barro and Jong-Wha Lee have assembled extensive world data on educational attainment for the entire second half of the 20<sup>th</sup> century. This is useful when examining countries' "endowments" of skilled labor. This data is available at [www.nber.org/data](http://www.nber.org/data).

3) The ipums website contains data on the United States Current Population Survey (CPS), international population surveys, census public use sub-samples, and the United States American Community Survey. These provide very large (sample size) and extensive (number of variables) data for many years. These data sets have been used extensively in empirical work. They are very useful for almost all questions related to wages and occupational choice. Although registration is required data is free and extracts can be created at [www.ipums.org](http://www.ipums.org).

4) The World Bank has provided a great service by posting various industrial concordances which are available at

[http://wits.worldbank.org/product\\_concordance.html](http://wits.worldbank.org/product_concordance.html)

Industry verbal definitions are available at:

<http://wits.worldbank.org/referencedata.html>

## Course Requirements

The grading metric will be slightly different between MA and Ph.D. students. MA students can choose to be graded as Ph.D. students but not the opposite. MA students must inform me by 1pm on September 14<sup>th</sup> if they wish to be graded as Ph.D. students otherwise they will be graded as MA students by default.

MA Grading System	Ph.D. Grading System
30% problem sets	25% problem sets
	10% referee report
	15% weekly questions and research proposal
30% mid-term	20% mid-term
40% comprehensive final exam	30% comprehensive final exam

The problem sets be a mix of theory and empirics. Some will be as simple as uploading data to STATA and running summary statistics and other will ask you to replicate a handful of very influential papers. The former will give you practical skills and teach you the more mundane tasks of the profession so that you will not waste time figuring them out later. The latter force you to get “under the hood” and see how these models work. In addition, I will also ask you to prove a few simple results on other problem sets. **MA students may work in groups of 3 on the problem sets but each Ph.D. student must turn in their own.**

The weekly questions and research proposal will be to get you started thinking about research. While a journal-quality polished project will not be required from the proposal, a simple question is a good place to start and this is the point of the weekly questions. Each week **prior to class** I ask that you write three simple questions and then 3-4 more sentences fleshing out why this is an interesting question and how you might answer it. Each of you will be assigned a Google Document to minimize the amount of paper floating around. Note: the questions each week should be distinct from previous weeks’ questions although they need not be completely unrelated. The goal is that you will have 30 or so questions at the end of the semester on which to base your research question. All it takes is just one to have a job market paper. More details regarding the proposal will be given when it is assigned. This will be assessed “check plus” (100%), “check” (75%), “check minus” (50%), or 0%.

The referee report is a written evaluation of a paper that I will assign you. It should evaluate the motivation for the paper and how well it answers the question it seeks to ask. In doing so, you should note that it is far more difficult to improve a paper than it is to point out its shortcomings. More detailed information will be provided when it is assigned. The referee report and problem sets will be graded as “check plus” (10%), “check” (6%), or “check minus” (2%).

## Academic Misconduct

Students should note that I do not tolerate any form of academic misconduct. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on the test or examination to dismissal from the university as outlined in the academic handbook. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties.

## ABSENCE FROM EXAMS.

- If you miss Midterm I due to illness or other *excused* absence and present a medical note within one week of the date of the test, all weight will be placed on the comprehensive end of term exam. Failure to produce a medical note in time will result in a mark of 0 on the midterm. Other excuses (e.g. funerals and car accidents) must be accompanied by a note from a responsible adult that I can verify *in order for excusal to even be considered*. The validity of these excuses will then be evaluated by the undergraduate chair.

- To be considered, an illness must render the student incapacitated and unable to take the exam. Vague illnesses such as “gastroenteritis”, “fever”, “inability to concentrate” will not be considered. In addition, in order for a doctor’s note to be accepted, the illness must be immediately verifiable to the doctor. Illnesses of the “student claims to be...” will not be accepted.

- If you miss the December exam due to an *approved* excuse, a make-up will be given at an mutually agreed upon time in the first 7 days of the Winter term (weekends included).

- The only acceptable medical notes are those provided by the University of Toronto Student Medical Certificate (see the Registration Handbook & Timetable for a copy of the certificate).

- The office of academic misconduct imposes a punishment of **suspension for 4 months for passing on fake sick notes.**

- The Faculty of Arts and Science selects the dates for examinations within the final exam period. You must not make travel, employment or other plans that may conflict with the date chosen for the examination in this course and any such conflict will not be accepted as grounds for writing a deferred exam. Instructors cannot make special arrangements with students who miss the final exam for any reason.

Test Score appeals: appeals will be conducted according to the following procedure: a) Please *type* a short paragraph explaining the grievance and why you should obtain additional points. Give a hard copy of this document to me. b) Conditional on this argument being found persuasive by me, the *entire* exam will be re-graded. Your score can go *up or down*.

## **Assigned Readings and Schedule**

Readings with a double asterisk (\*\*) are required. Readings with a single asterisk (\*) are suggested. Remaining readings are for those with further interest in the subject.

### **Basic Gains from Trade and Comparative Advantage**

\*\*DN Ch. 3 (pg. 71-72) and Ch. (pg. 93-95)

\*Costinot, Arnaud (2009), "An Elementary Theory of Comparative Advantage", *Econometrica*, Vol. 77 No. 4, pp. 1165-1192.

\*Deardorff, Alan V. (1980) "The General Validity of the Law of Comparative Advantage" *The Journal of Political Economy*, Vol. 88, No. 5, pp. 941-957

Bernhofen, Daniel M. and John C. Brown (2004), "A Direct Test of the Theory of Comparative Advantage: The Case of Japan," *Journal of Political Economy*, Vol. 112, No. 1, pp. 48-67

### **The Ricardian Model**

\*\*F Ch. 1 (pg. 1-4)

\*\*Dornbusch, Rudiger and Stanley Fischer, and Paul Samuelson (1977) "Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods," *The American Economic Review*, Vol. 67, No. 5, pp. 823-839

\*\* Eaton, Jonathan and Samuel Kortum (2002) "Technology, Geography, and Trade," *Econometrica*, Vol. 70, No. 5, pp. 1741-1779.

\* Costinot, Arnaud and David Donaldson (2012) "What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas," *American Economic Review Papers and Proceedings*, Vol. 102, No. 3, pp 453-458.

Costinot, Arnaud and David Donaldson, and Ivana Komunjer (2012) "What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas," *Review of Economic Studies*, Vol. 79, No. 2, pp 581-608.

### **Heckscher-Ohlin (Theory)**

\*\*F Ch. 1-3

\*Deardorff, Alan V. (1982) "The General Validity of The Heckscher-Ohlin Theorem," *The American Economic Review*, Vol. 72, No. 4, pp. 683-694

\*Jones, Ronald (1965) "The Structure of Simple General Equilibrium Models," *The Journal of Political Economy*, Vol. 73, No. 6, pp. 557-572

Dornbusch, Rudiger and Stanley Fischer, and Paul Samuelson (1980) "Heckscher-Ohlin Trade Theory with a Continuum of Goods," *The Quarterly Journal of Economics*, Vol. 95, No. 2, pp. 203-224

Ethier, Wilfred (1984) "Higher Dimensional Issues in Trade Theory." In R.W. Jones and P.B. Kenen eds. *Handbook of International Economics* Vol. 1, Amsterdam: North-Holland, 1984. Ch. 3

Neary, J. Peter (1978): "Short-run Capital Specificity and the Pure Theory of International Trade," *Economic Journal* v. 88, pp. 488-510.

### **Heckscher-Ohlin (Empirics)**

\*\*Romalis, John (2004), "Factor Proportions and the Structure of Commodity Trade," *American Economic Review*, Vol. 94, No.1, pp. 67-97. **Focus on the introduction, Section II, and Section III.**

\*Bowen Harry and Edward Leamer and Leo Sveikauskas, (1987) "Multicountry, Multifactor Tests of the Factor Abundance Theory" *The American Economic Review*, Vol. 77, No. 5, pp. 791-809

\*Davis, Donald and David Weinstein (2001) "An Account of Global Factor Trade," *The American Economic Review*, Vol. 91, No. 5, pp. 1423-1453

\*Morrow, Peter and Daniel Trefler (2017) "Endowments, Factor Prices, and Skill-Biased Technology: Importing Development Accounting into HOV", Working Paper

\*Trefler, Daniel (1993) "International Factor Price Differences: Leontief was Right!" *The Journal of Political Economy*, Vol. 101, No. 6, pp. 961-987

\*Trefler, Daniel (1995) "The Case of the Missing Trade and Other Mysteries," *The American Economic Review*, Vol. 85, No. 5, pp. 1029-1046

Leamer, Edward (1980) "The Leontief Paradox, Reconsidered." *Journal of Political Economy*, Vol. 88 pp. 495-503

### **Models of Increasing Returns to Scale**

\*\*Krugman, Paul (1979) "Increasing Returns, Monopolistic Competition, and International Trade" *Journal of International Economics* Vol 15. Pp. 313-321

\*\*Krugman, Paul (1980) "Scale Economies, Product Differentiation, and the Pattern of Trade," *The American Economic Review*, Vol. 70, No. 5 (Dec., 1980), pp. 950-959

Ottaviano, Gianmarco and Takatoshi Tabuchi, and Jacques-Francois Thiesse (2002) "Agglomeration and Trade Revisited," *International Economic Review*, Vol. 43, No. 2, pp. 409-435

## **October 26<sup>th</sup>: Midterm**

### **Gravity, Geography, and Trade**

\*\* [Revisited] Eaton, Jonathan and Samuel Kortum (2002) "Technology, Geography, and Trade," *Econometrica*, Vol. 70, No. 5, pp. 1741-1779

\*\*Redding, Stephen and Anthony Venables (2004) "Economic Geography and International Inequality," *Journal of International Economics*, Vol. 62, No. 1, pp. 53-82

\*Anderson, James and Eric van Wincoop (2003) "Gravity with Gravitas: A solution to the border puzzle," *American Economic Review*, Vol. 92, No. 1, pp. 170-192

Alvarez, Fernando and Robert Lucas (2007) "General equilibrium analysis of the Eaton-Kortum model of international trade," *Journal of Monetary Economics*, vol. 70, No. 6, pp. 1726-1768

Anderson, James (2011) "The Gravity Model", *Annual Review of Economics*, vol. 3, pp. 133-160.

Fujita, Masahisa and Paul Krugman and Anthony Venables (1999) *The Spatial Economy: cities, regions, and international trade*, The MIT Press, Cambridge, MA.

Head, Keith and Thierry Mayer (2014) "Gravity Equations: Workhorse, Toolkit, and Cookbook", *Handbook of International Economics*.

Krugman, Paul and Anthony Venables (1995) "Gloabalization and the Inequality of Nations", *Quarterly Journal of Economics*, Vol. 110, no. 4 (1995): 857-880.

Redding, Stephen and Esteban Rossi-Hansberg (2017) "Quantitative Spatial Economics", *Annual Review of Economics*, Vol. 9, pg. 21-58

### **Trade and Wages in Developed Countries**

\*\*Autor, David and Frank Levy, and Richard Murnane (2003) "The Skill Content of Recent Technological Change: An Empirical Exploration," *Quarterly Journal of Economics*, November.

\*\*Autor, David and David Dorn (2013), "The Growth of Low Skill Service Jobs and the Polarization of the U.S. Labor Market," *American Economic Review*, 103(5), 1553-1597

\*\*Autor, David and David Dorn and Gordon Hanson (2013), "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *American Economic Review*, 103(6), 2121-2168

\*\*F ch. 4

\*\*David Hummels & Rasmus Jorgensen & Jakob Munch & Chong Xiang, (2014), "The Wage Effects of Offshoring: Evidence from Danish Matched Worker-Firm Data," *American Economic Review*, vol. 104(6), pages 1597-1629.

\*Acemoglu, Daron and David Autor and David Dorn and Gordon Hanson and Brendan Price (2015), "Import Competition and the Great U.S. Employment Sag of the 2000s," *Journal of Labor Economics*, forthcoming

\*Autor, David and David Dorn and Gordon Hanson (2014), "Trade Adjustment: Worker Level Evidence," *Quarterly Journal of Economics*, 129(4), 1799-1860

\*Autor, David and David Dorn and Gordon Hanson (2015), "Untangling Trade and Technology: Evidence from Local Labour Markets," *Economic Journal*, 125(584), 621-646

\*Pierce, Justin R, and Peter K Schott, (2015) "The Surprisingly Swift Decline of U.S. Manufacturing Employment." Yale Department of Economics Working Paper.

Autor, David and David Dorn, and Gordon H. Hanson (2016) "The China shock: Learning from labor-market adjustment to large changes in trade", *Annual Review of Economics*, Vol. 8 pages 205-240. *This article summarizes much of the "China shock" literature by Autor, Dorn, and Hanson that is cited above.*

Berman, Eli and John Bound, and Zvi Griliches, (1994) "Changes in the Demand for Skilled Labor Within U.S. Manufacturing Industries: Evidence from the Annual Survey of Manufacturing" *The Quarterly Journal of Economics*, Vol. 109, No. 2, pp. 367-397

Erhan Artuc & Shubham Chaudhuri & John McLaren, 2010. "Trade Shocks and Labor Adjustment: A Structural Empirical Approach," *American Economic Review*, vol. 100(3), pages 1008-45.

Firpo, Sergio and Nicole Fortin & Thomas Lemieux, (2013), "Occupational Tasks and Changes in the Wage Structure" Working Paper, University of British Columbia

Harrison, Ann and John McLaren, and Margaret McMillen (2011) "Recent Perspectives on Trade and Inequality", *Annual Review of Economics*, Vol. 3 pp. 261-289

Katz, Lawrence and Kevin Murphy, (1992): "Changes in Relative Wages, 1963-1987: Supply and Demand Factors," *The Quarterly Journal of Economics*, Vol. 107, No. 1, pp. 35-78

McLaren, John (2017) "Globalization and Labor Market Dynamics", *Annual Review of Economics*, Vol. 9, pp. 177-200

### **Trade and Wages in Developing Countries**

\*\*Golberg, Pinelopi and Nina Pavcnik (2007) "Distributional Effects of Globalization in Developing Countries," *Journal of Economic Literature*, Vol. 45, No. 1, pg. 39-82

\*\*Raphael Dix-Carniero and Brian Kovak (2017) "Trade Liberalization and Regional Dynamics" *American Economic Review*, *forthcoming*

\*\*Kovak, Brian (2013) "Regional Effects of Trade Reform: What is the Correct Measure of Liberalization?" *The American Economic Review*, Volume 103, Number 5, August 2013, pp. 1960-1976(17)

\*\*Eric Verhoogen (2008) "Trade, Quality Upgrading and Wage Inequality in the Mexican Manufacturing Sector" *The Quarterly Journal of Economics*, Vol. 123, No. 2, pp 489-530.

### **Productivity Estimation in International Trade (time permitting; preliminary)**

\*\*De Loecker, Jan and Pinelopi Goldberg (2014) "Firm Performance in a Global Market", *Annual Review of Economics*, Vol. 6 pages 201-227

Holmes, Thomas J. and James A. Schimdt (2011) "Competition and Productivity: A Review of Evidence", *Annual Review of Economics*, Vol. 2 pages 619-642

Ackerberg, Daniel, Lanier Benkard, Steven Berry and Ariel Pakes (2007) "Econometric Tools for Analyzing Market Outcomes", *Handbook of Econometrics*, Vol. 6, pages 4171-4276 **Section 2.**