

INTA 3304 International Trade & Production
INTA 6011 International Trade & Technology Transfer

Fall 2019

T,Th 3-4:15

Skiles 169

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Visitation: Tue 12-1 or by appt.

This class is about three fundamental arenas in which economic development takes place. The first is economic production. In particular, this class will look at longer-term trends in economic production by different countries, including their relative wealth and status in the world economy. The second is trade. This class will look at different facets of trade as it interacts with production and technology transfer, including trade barriers and agreements. The third arena is technology transfer. This class will look at technology transfer models and the issues involved in actually bringing about tech transfer.

The emphasis of this class is on examining these phenomena through the use of data analysis and visualization, through the lens of networks, and on representing these phenomena dynamically through the use of simulations and animations.

There will be a final project. For undergraduates, the project will focus on relating economic production and trade across a sample of countries. For graduate students, the project focus will be an analysis of a technology transfer problem and how to implement a policy to manage or solve that problem.

I expect integrity in your work.

Intended learning outcomes of the class:

Students will demonstrate methodological literacy to analyze to international political phenomena.

Students will use oral communication to demonstrate knowledge and to make cogent arguments in international affairs.

Students will demonstrate proficiency in written communication to increase knowledge and develop cogent arguments in international affairs.

Students will demonstrate the relationship between science and technology and international affairs.

Students will demonstrate the ability to collaborate effectively in teams.

Week of:

Aug. 20, 22 Long-term History of Trade and Production and Technology Transfer

Read: Bernstein, *A Splendid Exchange*

- animation of trade network growth

Aug. 27, 29 Power Cycles and Power/Leader Transition Theory

Read: Heim, <https://muse.jhu.edu/article/365937/pdf>

Doran, <http://slantchev.ucsd.edu/courses/pdf/doran-power-cycle.pdf>

- measures of economic production - GDP, GNI, PPP
- measures of power and economic power from 1500 to 1945
- animation of movement of center of gravity of power

Sept. 3, 5 The Rise of China

Read: Luce, <https://www.theatlantic.com/international/archive/2017/04/china-economy-populism/523989/>

Mishra, <https://www.nytimes.com/2018/02/07/magazine/the-rise-of-china-and-the-fall-of-the-free-trade-myth.html>

- Belt and Road Initiative
- Nine-dash Line and South China Sea
- Naval bases around Indian Ocean
- Made in China 2025
- Quantum computing and artificial intelligence

Due on 5th: Analysis of power cycles using long-term data

Sept. 10, 12 Technology Transfer and Development

Read: Wahab, et al. article

Ramanatham article

Sept. 17, 19 Economic Production Functions and Trade Functions

Read: Taylor, *The Politics of Innovation*, Chapter 6

- Cobb-Douglass
- CES (constant elasticity of substitution)
- Armington
- Hickman and Lau

Sept. 24, 26 Models of Economic Production and Trade

- IFs (International Futures) <https://pardee.du.edu/>
- look at documentation/help pages

Oct. 1, 3 Making a Political-Economic Model with Technology Transfer

Read:- Stella software

Stiglitz, Fitoussi, Durand, *Beyond GDP*, Chapters 1, 4

Oct. 8, 10 Visualization of Economic and Political Data

- Using Tableau (tableau.com)

- look at online support

Due on 10th: presentation and description of model with tech transfer

Oct. 17 Trade and Technology Transfer Networks

- Using Tulip

- look at tutorials and documentation (<https://tulip.labri.fr/TulipDrupal/>)

Oct 22, 24 Analysis of Trade and Technology Networks

- measures of network character and their visualization

Oct. 29, 31 Trade Barriers: Tariffs, Quotas, Non-Tariff Barriers

Read: Foreign Trade Barriers Report, pp 1-5, 97-118

Due on 31st: presentation and description of political-economic network analysis

Nov. 5, 7 Forced Technology Transfer into China

Read: Branstetter, Chinas forced technology transfer problem

South China Sea Morning Post article

Nov. 12, 14 Trade Agreements

Nov. 19, 21 Changes in Countries' Status in the International Economic System

Nov. 26 Re-thinking Governance of the International Economic System

Due on 26th: presentation and description of current economic "status" rankings

Dec. 3 Presentation of Class Projects

Dec. 9 Submission of Final Projects

Allocation of points:

Assignments 1, 2, 3 15% each

Assignment 4 5%

Final project and presentation	35%
Participation	15%

Note that participation is more than physical presence in the classroom.