world trade institute

World Trade Institute, University of Bern
Applied General Equilibrium Theory for PhD Students
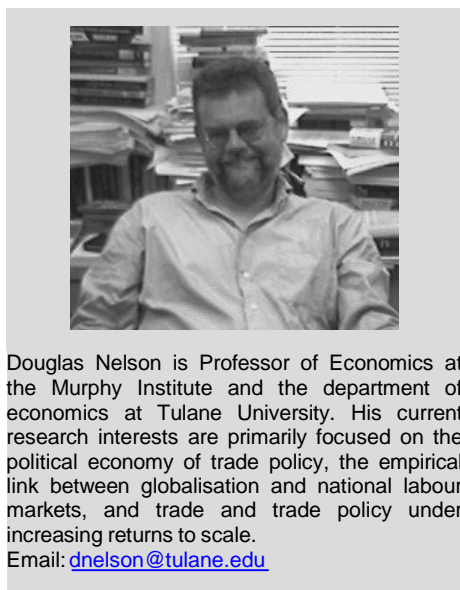### 27 July – 3 August 2018

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UNIVERSITÄT BERN

Course Goals

It is arguable that general equilibrium thinking is what makes economists economists. Recognising the interdependence of markets and applying tools developed to represent and analyse that interdependence is an essential weapon in the applied economist's arsenal. At the same time, the complexity of these tools requires that we clearly understand their limits. This course provides an overview of equilibrium analysis for competitive markets. We will begin with an overview of the problem of general equilibrium modeling. Then, we will review the basic results of pure theory that unterlie our applied work: existence and finiteness of equilibria and the existence of comparative statics. Finally, we will cover applied general equilibrium modeling by developing simple, tractable models that allow us to analyse specific policy questions.

Lecturer

Douglas Nelson is Professor of Economics at the Murphy Institute and the department of economics at Tulane University. His current research interests are primarily focused on the political economy of trade policy, the empirical link between globalisation and national labour markets, and trade and trade policy under increasing returns to scale.
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Course Content

A.   A Pure Theory of General Equilibrium: MWG Chapters 15 & 17

1.   Existence
2.   Finiteness
3.   Core Welfare Theorems
4.   Sonnenschein-Debreu-Mantel Theorem

B.   Developing Intuition: Low-Dimensional Graphics

5.   The 2x2 Model: Lerner 1952
6.   Extending the basic graphics: Melvin (1968), Woodland (1977)

Course Content

C.   Developing Intuition: Low-Dimensional Analytics

7.   Jones' Algebra: Jones (1965)
8.   Demand endogenous with distortions: Jones (1971); McClure (1975)

D.   GE with *m*-factors and *n*-goods

9.   Maximum Value Functions for GE: MWG (16,G), Woodlands (1982, cptr 4)
10.   Stolper Samuelson Theorem: The High Dimensional Case (Jones & Scheinkman)

E: Extending the Model

11.   GE with Unemployment (Davidson, Martin, Matusz 1988)
12.   GE with Monopolistic Competition: Dixit & Stiglitz (1977); Ethier (1982)
13.   GE with Heterogeneous Firms: Melitz (2003)

Grading

Class participation (10%); take-home exam (90%). Participants taking this course for credit must attend all lectures and complete the take-home exam.

Organisation

The course is intended for PhD students. A limited number of persons with relevant professional or academic interest may be also admitted.

Lecture hours: 25   ECTS: 4

Timetable and Registration

The course takes place from Friday to Friday (w e e k e n d   o f f) from 9.30 to 12.00 and from 13.30 to 16.00 in the Silva Casa at the World Trade Institute, University of Bern, Hallerstrasse 6, 3012 Bern. This is an intensive course. You should prepare by completing some readings before the course begins.

Tuition fee: 500 CHF. Financial support may be available.

For more information, please visit the doctoral programme section of our website:

https://www.wti.org/education/doctoral-programme/

Send your application to: phd.applications@wti.org

This course is organised in the context of the *Doktoratsprogramme universitäre Hochschulen 2017-2020*.

Bibliography

Davidson, Martin and Matusz (1988). "The Structure of Simple General Equilibrium-Models with Frictional Unemployment." Journal of Political Economy, V.96-#6, 1267-93.

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Ethier (1982). "National and International Returns to Scale in the Modern Theory of International Trade." American Economic Review, V.72-#3, 389-405.

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Jones and Scheinkman (1977). "The Relevance of the Two-Sector Production Model in Trade Theory". Journal of Political Economy; V.85-#5, pp. 909-935.

McLure (1975). "General Equilibrium Incidence Analysis: The Harberger Model after Ten Years." Journal of Public Economics, V.4-#2, 125-61.

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Woodland (1982). "The Production Sector". Chapter 3 of International Trade and Resource Allocation. Amsterdam: North-Holland, pp. 39-65. [Blackboard]

For a more extensive bibliography, see the syllabus for my Micro 2 course at Tulane:

http://nelson.wp.tulane.edu/course-material/econ-7520-micro-ii/