

# Geopolitical Modeling (DIP725)

Fall 2010

Version, July 5, 2010

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Meeting Time: Thursday 4:00-6:30  
Meeting Place: Van Room  
Offices Hours: WD: 1:00-4:00

This course uses a large, but user-friendly, computer model of the world's political and economic systems to explore a variety of policy questions from a quantitative viewpoint. The emphasis will be on long-range, global issues, with a heavy focus on issues related to economic development and globalization. The course will explore how to frame issues analytically, how assumptions can affect policies, and how policies can affect outcomes. The course will review current quantitative research on key international relations topics such as demographic change, world agriculture, energy, international trade and finance, instability, and war. The course will emphasize the use of the model and quantitative tools in general to produce real-world foreign policy analysis of potential use to policy makers and advisors.

The course is designed to be of particular use to future government analysts but it will also be helpful to those considering careers in policy-oriented non-governmental organizations (NGOs) or global business.

**Prerequisites:** DIP 725 requires some prior training in economics and statistical methods. Incoming students who have had no undergraduate economics training are advised to take ECON 672 before taking any course I teach (the others are DIP 720, DIP 725, and DIP 735). Students must also have taken STAT 570 or equivalent.

**Format:** The class will be taught primarily through sessions devoted to learning the use of the International Futures Model (IFs) with extensive discussion of the literature pertinent to the construction of the model and literature framing selected policy debates that the model is competent to address. It would be extremely helpful if each student brought a notebook computer to each class; the model software is free and is available at <http://www.du.edu/~bhughes/ifs.html>. The class will also use the EXCEL spreadsheet program that comes with the Microsoft Office Suite.

The first several weeks of the class will involve guidance on the use of the model and extensive homework practice sessions. The software supporting the model is easy—one does not have to be a programmer to master it. But the model is complicated and if the student falls behind in the early instruction period it will be difficult to gain mastery.

As mastery with the model grows, the class meetings will focus on using the model to address important long-range policy issues of the sort that may come to the attention of a policy analyst working at the national or international level.

**Grading:** Grading will be based on class participation (15%), homework exercises (45%), a midterm (20% each), and the final test (20%). As the grading weights above indicate, the homework is very important. The homework, even more than the tests, will show whether the student understands how to use the model to do policy analysis. Students taking comprehensive exams this semester will be excused from taking the last test if they wish and if they choose to answer a development question on comps which I will grade as a substitute for the final. The class will be graded on a curve, with roughly half A's and half B's, rounded up at the margin. There might be a C or two if a student is not doing the work, or fails to comprehend the material, or fails to express himself/herself adequately.

As in any UK course, plagiarism and cheating will not be tolerated. Working together on the homework assignments is encouraged, but all in-class tests and the final exam must represent individual effort. High-quality oral and written expression in English is also required in this class.

Attendance is not required at any class, therefore excuses for nonattendance are not necessary. If an assignment or test cannot be completed on time, the student must make prior arrangements with me. Classroom exercises must be turned in by the start of the class (but keep a copy because we might be going through or going beyond the exercise during class). Make sure you have access to the Blackboard site for this class. Get in the habit of checking it every day or so.

**Open-Door Policy:** If my office door is open (and I'm not on the phone or talking to someone else) I am available for consultation.

**Required Textbooks:**

*International Futures*, fourth edition, Barry Hughes and Evan Hillebrand  
(Paradigm Publishers, 2006).

*Economics of Development*, Sixth Edition, Dwight Perkins, Stephen Radelet,  
and David Lindauer (W.W. Norton, Co. 2006).

*Analysis of Economic Data*, Gary Koop (Wiley and Sons, 2005)

**Required Computer Software:** International Futures Model, version 6.32, available for free at:  
<http://www.ifs.du.edu/ifs/index.aspx>

**Readings:** Other readings will also be assigned and may be found at Young Library Website (noted below as either YLE for journal articles or YLebook for books available electronically, from the class Blackboard site (BB) or from the listed URL or from the class BOX in the student room. The readings listed for each class should all be read before class to ensure the class is as meaningful and helpful to all as it should be. (Reading assignments may vary somewhat from the syllabus as the class progresses.) Supplemental readings will be noted in lighter ink and might be discussed in class if time permits or student interest requires. They will be testable only to the extent they have been discussed in class. Each student will be expected to read *The Economist* every week and be prepared to discuss relevant current articles relevant to classroom materials.

**26 Aug, Week 1: Model Set Up and Orientation Session**

Come to class with an IBM-type computer. We will install the model software using the wireless internet connection or a CD (It would be helpful if you install the model from the IFs website before the first class). If you don't have the right equipment it will still be possible to take the class and do the work, but it will be harder because you might have to use the computers in the student room. I will give a brief introduction to the model, and help you get started on the first homework assignment. It would be helpful if you have read the first 4 chapters of Hughes *prior to the first class*.

*Homework assignment #1 will be due at the start of next class.*

Read Hughes ch 1-4 before Class 2 if you haven't already done this.

**2 Sep, Week 2: Population Modeling**

**In-class exercise —EXCEL Population Model**

Hughes: ch 5

Perkins, *Economics of Development*, ch 7, pp 237-273, "Population"

Paul Ehrlich—ch 1, from *The Population Explosion* (Simon and Schuster, 1990). (Box)

Browse: [www.prb.org](http://www.prb.org) (Population Reference Bureau)

[www.un.org/esa/population/unpop.htm](http://www.un.org/esa/population/unpop.htm)

*Homework assignment #2 will be due at the start of next class.*

### **9 Sep, Week 3: Economic Modeling**

#### **In-class exercise —EXCEL Economic Growth Model**

Hughes, ch 6

Perkins, *Economics of Development*, ch 3, (pp 59-102) “Economic Growth: Concepts and Patterns”, pp 59-102.

Supplemental Readings:

*IFs Help Files—Black Box-Economy-Equations-Gds and Svs-Production Function*

*Homework assignment #3 will be due at the start of next class.*

### **16 Sep, Week 4: Statistics/Econometrics Review and Cross-Country Growth Regressions**

Koop, chs. 3,4, and 6

Robert Barro, ch 12 from *Economic Growth* (McGraw Hill, 1999) (YLebook or Box)

*Homework assignment #4 will be due at the start of next class.*

### **23 Sep, Week 5: Agriculture**

Hughes: ch 7

Perkins, ch. 16 (pp 607-650)

Lester Brown, ch 7, “Feeding Everyone Well”, from *The Eco-Economy*. (BB)

Bjorn Lomborg, ch 9, “Will We Have enough Food”, in *The Skeptical Environmentalist*. (Box)

Paul Collier, “African Agriculture in 50 Years” (BB)

Jeffrey Sachs, “Peasant Farm Renaissance”, *The International Economy*, Sept 2009, pg 54-55 (YLE)/

Browse: <http://www.fao.org/>

Supplemental reading:

Julian Simon, “Forecasting the Long-Term Trend of Raw Material Availability” in *Economics Against the Grain*, Vol 2, pp 543-551. (Box)

*Homework assignment #5 will be due at the start of next class.*

### **30 Sep, Week 6: The Environment**

Hughes, ch 9

Meadows and Meadows, ch 6, pp 161-189, in *Limits to Growth: The 30-Year Update*. (Box)

Freeman Dyson, “The Question of Global Warming”, *New York Review of Books*, June 12, 2008, (BB)

Thomas Homer Dixon, “On the threshold: Environmental Changes as Causes of Acute Conflict”,

*International Security*, vol 16, no 2. (Autumn, 1991), pp 76-116 (YLE and Box)

Brahma Chellaney, “Coming Water Wars”, *The International Economy*, Fall 2009, pg 38-39. (YLE)

Browse: [www.earth-policy.org](http://www.earth-policy.org) (Lester Brown’s site)

[www.copenhagenconsensus.com](http://www.copenhagenconsensus.com) (Lomborg’s site)

### **7 Oct, Week 7:**

#### **Test 1: Demography, Economics, Econometrics, Agriculture, Environment**

### **14 Oct, Week 8: Development**

Perkins: ch 20, “Sustainable Development”, pp 757-804

Lester Brown, Ch 1, “The Economy and the Earth” in *Eco-Economy* (W.W. Norton, 2001), (Box)

Beckerman: ch 2, “Finite Resources and the Prospects for Economic Growth” in

*A Poverty of Reason* (Independent Institute, 2002), (Box)

*Homework assignment #6 will be due at the start of next class.*

### **21 Oct, Week 9: Foreign Aid, Inequality**

Perkins, ch 14, pp 519-554

Peter Lindert and Jeffrey Williamson, “Does Globalization Make the World More Unequal?” NBER

Working Paper, 2001, <http://www.nber.org/papers/w8228> (or BB)

Evan Hillebrand, “The Global Distribution of Income in 2050”, *World Development*, 36:5, pp 727-740, 2008 (YLE)

Robert Hunter Wade, “Is Globalization Reducing Poverty and Inequality”, *World Development*, 32-4, pp 567-89, 2004 (YLE)

*Homework assignment #7 will be due at the start of next class.*

### **28 Oct, Week 10: Trade, Finance, and Migration**

Review: Hughes, ch 6, pp 109-124.

Perkins, ch. 19, "Trade and Development", pp 709-756

Evan Hillebrand, "Deglobalization Scenarios: Who Wins, Who Loses?"  
*Global Economy Journal*, June, 2010, pp 1-15 (YLE)

### **4 Nov, Week 11: Democracy and State Failure - 1**

Hughes, Ch. 10

Jack Goldstone, "How to Construct Stable Democracies", *The Washington Quarterly*, 28:1, pp 9-20 (YLE)

Daron Acemoglu, ch. 3 (pp 48-81) in *Economic Origins of Dictatorship and Democracy*, (YLEbooks)

Bruce Bueno de Mesquita and Hilton Root, "The Political Roots of Poverty" *The National Interest*,  
Summer 2002 (YLE)

Larry Diamond, "Universal Democracy", *Policy Review*, pp 3-25, Jun 2003.

<http://www.hoover.org/publications/policyreview/3448571.html> (URL)

Larry Diamond, "The Democratic Rollback", *Foreign Affairs*, pp 36-48,  
Mar/Apr 2008. (YLE)

<http://fullaccess.foreignaffairs.org/20080301faessay87204/larry-diamond/the-democratic-rollback.html> (URL from university-privileged computers)

Fareed Zakaria, "The Rise of Illiberal Democracy", *Foreign Affairs*, June 1997,

<http://www.foreignaffairs.org/19971101faessay3809/fareed-zakaria/the-rise-of-illiberal-democracy.html> (URL)

Browse: [www.cicdm.umd.edu/inscr/polity](http://www.cicdm.umd.edu/inscr/polity)

Homework assignment #8 will count as two assignments and will be due on 18 November.

### **11 Nov, Week 12: State Failure – 2**

Jack Goldstone, "Global report on Conflict, Governance, and State Fragility, 2007", *Foreign Policy Bulletin*, January 2007 (YLE)

Ronald Inglehart and Wayne Baker, "Modernization, Cultural Change, and the Persistence of Traditional Values", *American Sociological Review*, 2000, vol. 65 (Feb), p 19-51. (YLE)

### **18 Nov, Week 13: Power and War**

Hughes, ch 11

Jack Snyder, "One World, Rival Theories", *Foreign Policy*, Nov/Dec 2004, p 53-62. (YLE)

Ronald Tamen et. al, ch 1, "Power Transitions Theory," in *Power Transitions*, (Seven Bridges Press, 2000). (Box)

Jacek Kugler, "The Asian Ascent: Opportunity for Peace or Precondition for War?",  
*International Studies Perspectives*, volume 7, 2006, pp 36-42 (YLE and Box)

Erik Gartzke, "War, Peace, and the Invisible Hand: Positive Political Externalities of Economic Globalization," *International Studies Quarterly* (2003) 47, 561-686. (YLE)

### **25 Nov: No Class, Thanksgiving Holiday**

### **2 Dec, Week 14: Energy**

Hughes, ch 8

Meadows and Meadows, pp 66-78, in *Beyond the Limits* (Chelsea Green, 1992). (Box)

Julian Simon, "Forecasting the Long-Term Trend of Raw Material Availability", from  
Simon, *Economics Against the Grain*, vol 2 (Edward Elgar, 1998). (Box)

Bjorn Lomborg, ch 11, "Energy", in *The Skeptical Environmentalist*. (Box)

Browse: <http://www.eia.doe.gov/>

**9 Dec, Week 15: Global Futures**

Hughes, cp 12

Kevin O'Rourke, "Power and Plenty in 2030", Conference Paper, 2009 (BB)

National Intelligence Council, *Global Trends 2025*, available at

[http://www.dni.gov/nic/PDF\\_2025/2025\\_Global\\_Trends\\_Final\\_Report.pdf](http://www.dni.gov/nic/PDF_2025/2025_Global_Trends_Final_Report.pdf)

Milan Ilnyckyj, Review of *The Black Swann* by Nassim Nicholas Taleb (BB)

George Friedman, Author's Note and Ch 1 from *The Next 100 Years* (BB)

**16 Dec: Final Exam**