

# ITRN 701

## Global Environmental Issues

**DRAFT SYLLABUS – 06/01/2007**

**NOTE:** Materials may be added, removed, reorganized, and switched between required and supplemental prior to the start of the semester.

Summer 2007, Tuesday and Thursday, 7:20-10:00 PM

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### **Course Description**

After reviewing theoretical frameworks for analyzing international trade and environmental issues, these models will be used to study a variety of topics including: (1) global warming, (2) environmental regulations and competitiveness, (3) the environment and the WTO, (4) ozone depletion, (5) sustainable development (including environmental accounting), and (6) environmental issues associated with NAFTA. The emphasis is on relating economic theory to practical applications.

### **Required Books (paperback)**

Pearson, Charles M. (2000), *Economics and the Global Environment*, Cambridge University Press.

### **Course Requirements and Grading**

First Exam (June 21) – 30 percent

Second Exam (July 12) – 30 percent

Final exam (July 26) - 40 percent (comprehensive with questions taken from first and second exams)

### **Course Outline and Readings**

#### ***Session 1 (June 5)***

*Required reading:*

Pearson, Charles (2000), Chapter 1, “Introduction and Plan of the Book”  
Pearson, Charles (2000), Chapter 2, “Interactions and Trade-offs”

*Supplemental reading:*

Fullerton, Don and Robert Stavins (1998), “How Economists See the Environment,”  
*Nature*, 395, 1 October, 433-434.

Principles of Microeconomics and International Economics texts are sources for reviewing microeconomics and international trade concepts. Here are two examples:

Mankiw, H.G., (2006), *Principles of Microeconomics*, South-Western Thomson, Fourth Edition.

Reinert, Ken (2005), *Windows on the World Economy: An Introduction to International Economics*, South-Western Thomson.

***Session 2 (June 7)***

*Required reading:*

Pearson, Charles (2000), Chapter 3, “The Roots of Environmental Degradation”  
Pearson, Charles (2000), Chapter 4, “Issues of Time”

*Supplemental reading:*

Newell, Richard and William Pizer (2002), “Discounting the Benefits of Climate Change Policies Using Uncertain Rates,” *Resources*, Winter (Issue 146), 15-20.

Nordhaus, William (2005), “Paul Samuelson and Global Public Goods, “A commemorative essay for Paul Samuelson,”

Pindyck, Robert (2006), “Uncertainty in Environmental Economics,” AEI-Brookings Joint Center for Regulatory Studies, Related publication 06-39, also in *Review of Environmental Economics Policy*, Vol. 1, No. 1, pp. 45-65.

Stavins, Robert N. (2007), “Tradable Permits: Fly in the Ointment?” *The Environmental Forum*, March/April.

U.S. EPA (2000), “Analysis of Social Discounting,” Chapter 6 (pp. 33-57), in *Guidelines for Preparing Economic Analysis*,

***Session 3 (June 12)***

*Required reading:*

Pearson, Charles (2000), Chapter 5, “How Clean is Clean Enough”

*Supplemental reading:*

Myrick Freeman III (2002), “Environmental Policy Since Earth Day I: What Have We Gained?” *Journal of Economic Perspectives*, 16, No. 1 (Winter), 125-146.

U.S. EPA (2000), “Analyzing Benefits,” Chapter 6 (pp. 59-112), in *Guidelines for Preparing Economic Analysis*,

**Session 4 (June 14)**

*Required reading:*

Pearson, Charles (2000), Chapter 6, “The Government’s Tool Kit”

*Supplemental reading:*

Benefit-Cost Analysis

Hahn, Robert W. (1998), “Policy Watch: Government Analysis of the Benefits and Costs of Regulation,” *The Journal of Economic Perspectives*, 12, No. 4 (Autumn), 201-210.

Hahn, Robert W. and Paul C. Tetlock (2007), “Has Economic Analysis Improved Regulatory Decisions?” AEI-Brookings Joint Center for Regulatory Studies, Working Paper 07-08. [Http://ssrn.com/abstract=982233](http://ssrn.com/abstract=982233)

Precautionary Principle

Sunstein, Cass R. (2003), “Beyond the Precautionary Principle,” U Chicago Law & Economics, Olin Working Paper No. 149; U of Chicago, Public Law, Working Paper No. 38. [SSRN is location of working paper]

Myers, N (1993), “Biodiversity and the precautionary principle.” *Ambio*. Stockholm, Vol. 22, no. 2-3, pp. 74-79.

Ragnar E. Löfstedt (2004), “The Swing of the Regulatory Pendulum in Europe: From Precautionary Principle to (Regulatory) Impact Analysis,” *Journal of Risk and Uncertainty*, 28, Number 3 (May), 237-260

Economic Incentives

Bell, Ruth Greenspan (2002), “Are Market-Based Instruments the Right First Choice for Countries in Transition?” *Resources*, Winter (Issue 146), 10-14.

Hanson, Craig and David Sandalow (2006), “Greening the Tax Code,” *Policy Brief, Tax Reform, Energy and the Environment*, Issue 1, Brookings Institution and World Resources Institute

### Voluntary Agreements

Cashore, Benjamin (2002), “Legitimacy and the Privatization of Environmental Governance: How Non–State Market–Driven (NSMD) Governance Systems Gain Rule–Making Authority,” *Governance*, 15, No. 4 (October), 503–529.

Harrison, Kathryn (1998), “Talking with the Donkey: Cooperative Approaches to Environmental Protection,” *Journal of Industrial Ecology*, 2, No. 3 (Summer), 51-72.

United States Government Accountability Office (2006), *Climate Change: EPA and DOE Should Do More to Encourage Progress Under Two Voluntary Programs*, GAO-06-97.

Morgenstern, Richard D. and William A. Pizer (2007), “How Well Do Voluntary Environmental Programs Really Work?” *Resources*, Winter (Issue 164), 23-26.

### ***Session 5 (June 19)***

#### *Required reading:*

Pearson, Charles (2000), Chapter 7, “Trade and Environment: An Overview of Theory”

#### *Supplemental reading:*

Pearson, Charles (2000), Chapter 8, “Theory of Trade and Environment: A Diagrammatic Exposition”

### ***Session 6 (June 21)***

#### *Required reading:*

Pearson, Charles (2000), Chapter 9, “Theory of Policy: Partial Equilibrium, Terms of Trade, and Distributional Issues”

Pearson, Charles (2000), Chapter 10, “Trade-Environment Policy; Evolution of the Debate and Taxonomy of the Issues”

#### *Supplemental reading:*

Esty, Daniel C. (2001), “Bridging the Trade-Environment Divide,” *Journal of Economic Perspectives*, 15, No. 3 (Summer), 113-130.

Vogel, David (2000), "The Environment and International Trade," *Journal of Policy History*, 12, No. 1, 72-100.

Fischer, Carolyn (2003), "Trading in Endangered Species: Legal Sales versus Total Bans?" *Resources*, Spring (Issue 150), 12-14.

Margolis, Michael (2004), "Fending Off Invasive Species: Can We Draw the Line without Turning to Trade Tariffs?" *Resources*, Spring (Issue 153), 18-22.

Interesting URLs:

Policy Debate: Does International Trade Harm the Environment? (numerous links)

[http://www.swpco.com/economics/policy\\_debates/trade\\_environment.html](http://www.swpco.com/economics/policy_debates/trade_environment.html)

Trade and Environment Database (TED)

<http://www.american.edu/projects/mandala/TED/ted.htm>

***Session 7 (June 26)***

*Required reading:*

Pearson, Charles (2000), Chapter 11, "Institutional and Policy Responses: OECD, WTO/GATT, EU, and NAFTA"

*Supplemental reading:*

Kyle Bagwell and Robert W. Staiger (2001), "The WTO as a Mechanism for Securing Market Access Property Rights: Implications for Global Labor and Environmental Issues," *Journal of Economic Perspectives*, 15, No. 3 (Summer), 69-88.

Esty, Daniel C. (2002), "The World Trade Organization's Legitimacy Crisis," *World Trade Review*, 1, No. 1, 7-22.

Runge, C. Ford (2001), "A Global Environment Organization (GEO) and the World Trading System: Prospects and Problems," mimeo

Interesting URLs:

European Union

[http://ec.europa.eu/environment/index\\_en.htm](http://ec.europa.eu/environment/index_en.htm)

<http://www.eea.europa.eu/>

World Trade Organization (WTO)

[http://www.wto.org/english/tratop\\_e/envir\\_e/envir\\_e.htm](http://www.wto.org/english/tratop_e/envir_e/envir_e.htm)

Commission for Environmental Cooperation (NAFTA)

<http://www.cec.org/home/index.cfm?varlan=english>

United National Environment Program: Environment and Trade Branch

<http://www.unep.ch/etb/index.php>

UNCTAD

[http://r0.unctad.org/trade\\_env/test1/publications.htm](http://r0.unctad.org/trade_env/test1/publications.htm)

Center for International Environmental Law

<http://www.ciel.org/>

### ***Session 8 (June 28)***

#### *Required reading:*

Pearson, Charles (2000), Chapter 12, “Empirical Studies”

#### *Supplemental reading:*

#### Environmental Goods and Services

[http://www.oecd.org/document/24/0,2340,en\\_2649\\_34183\\_36649688\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/24/0,2340,en_2649_34183_36649688_1_1_1_1,00.html)

#### Environmental Requirements and Market Access

[http://www.oecd.org/document/42/0,2340,en\\_2649\\_34183\\_35809002\\_1\\_1\\_1\\_1,00.html#HTO](http://www.oecd.org/document/42/0,2340,en_2649_34183_35809002_1_1_1_1,00.html#HTO)

#### Competitiveness

SQW – Economic Development Consultants (2006), *Exploring the Relationship between Environmental Regulation and Competitiveness: A Literature Review*, a research report completed for Department for Environment, Food, and Rural Affairs (DEFRA), United Kingdom.

#### Pollution Abatement Costs

Organization for Economic Co-operation and Development, Environment Directorate (2003), “Pollution Control and Abatement Expenditure in OECD Countries,” <http://www.oecd.org/dataoecd/41/57/4704311.pdf>

#### Eco-labeling

Bjørner, B. T., L. Garn Hansen and C. S. Russell (2003), ‘Environmental Labelling and Consumers’ Choice – An Empirical Analysis of the Effect of the Nordic Swan’, *Journal of Environmental Economics and Management* 47, 411–434.

Brockmann, K. L., J. Hemmelskamp and O. Hohmeyer (1996), *Certified Tropical Timber and Consumer Behaviour*, Germany: Centre for European Economic Research, Physica Verlag Heidelberg.

Environmental Protection Agency (1998), *Environmental Labeling – Issues, Policies, and Practices Worldwide*, Washington, DC: U.S. EPA.  
<http://www.epa.gov/epp/pubs/envlab/report.htm>

Carolyn Fischer, Francisco Aguilar, Puja Jawahar, and Roger A. Sedjo (2005), "Forest Certification: Toward Common Standards?" RFF Discussion papers, 05-10 (April)

### ISO 14000

Matthew Potoski, Aseem Prakash (2005), Covenants with weak swords: ISO 14001 and facilities' environmental performance. *Journal of Policy Analysis and Management* 24:4, 745

### Pollution Havens

Brunnermeier, Smita B. and Arik Levinson (2004), "Examining the Evidence on Environmental Regulations and Industry Location," *The Journal of Environment Development*, 13, 6-41.

Copeland, Brian and M. Scott Taylor (2004), "Trade, Growth, and the Environment," *Journal of Economic Literature*, 42, No. 1 (March), 7-71.

### Interesting URLs:

EU Eco-label Regulation,  
[http://ec.europa.eu/environment/ecolabel/index\\_en.htm](http://ec.europa.eu/environment/ecolabel/index_en.htm)

International Organization for Standardization ([www.iso.org](http://www.iso.org))  
<http://www.iso.org/iso/en/iso9000-14000/index.html>  
<http://www.iso.org/iso/en/prods-services/otherpubs/iso14000/index.html>

### ***Session 9 (July 3)***

#### *Required reading:*

Pearson, Charles (2000), Chapter 13, "International Environmental Externalities: Theory and Policy Responses"

#### *Supplemental reading:*

Cruise Ship Pollution

Copeland, Claudia (2006), "Cruise Ship Pollution: Background, Laws and Regulations, and Current Issues," *CRS Reports*, RL32450, 6 October.

#### Global Environmental Facility

Fletcher, Susan R. (2005), "Global Environmental Facility (GEF): Overview," CRS Report for Congress, RS21858, 28 October.

#### Montreal Protocol (ozone)

Stephen J. DeCanio and Catherine S. Norman (2005), "Economics of the "Critical Use" of Methyl Bromide Under the Montreal Protocol," *Contemporary Economic Policy*, 23, No. 3, 376-393

Morrissey, Wayne A, (2006), "Methyl Bromide and Stratospheric Ozone Pollution, CRS Report for Congress, RS20863, 11 December.

#### Interesting URLs:

Multilateral Environmental Agreements

<http://www.unep.ch/etb/areas/promMEAimp.php>

Commission for Environmental Cooperation (NAFTA)

[http://www.cec.org/pubs\\_info\\_resources/law\\_treat\\_agree/index.cfm?varlan=english](http://www.cec.org/pubs_info_resources/law_treat_agree/index.cfm?varlan=english)

Montreal Protocol

<http://ozone.unep.org/>

<http://www.unido.org/doc/5072>

<http://www.ciesin.columbia.edu/TG/PI/POLICY/montpro.html>

<http://hq.unep.org/ozone/Montreal-Protocol/Montreal-Protocol2000.shtml>

***NO CLASS (July5)***

***Session 10 (July 10)***

*Required reading:*

Pearson, Charles (2000), Chapter 14, "Economics and Global Warming"

*Supplemental reading:*

Leggett, Jane (2007), "Climate Change: Science and Policy Implications," *CRS Reports*, RL33849, 25 January.

Warwick J. McKibbin and Peter J. Wilcoxon (2002), “The Role of Economics in Climate Change Policy,” *Journal of Economic Perspectives*, 16, No. 2 (Spring), 107-129. (Summer 2003, pp. 204-206 comments)

### Stern Report

[http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)

[http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/sternreview\\_index.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm)

Video of Yale debate (Stern vs. Nordhaus)

[http://www.ycsg.yale.edu/activities/events\\_video.html](http://www.ycsg.yale.edu/activities/events_video.html)

### Ethanol and its consequences

Runge, C. Ford and Benjamin Senauer (2007), “How Biofuels Could Starve the Poor,” *Foreign Affairs*, (May/June 2007).

Tilman, David and Jason Hill (2007), “Corn Can’t Solve Our Problem,” *Washington Post*, March 25, page B01.

### ***Session 11 (July 12)***

#### *Required reading:*

Pearson, Charles (2000), Chapter 15, “Economics and Ocean Fisheries”

#### *Supplemental reading*

Sanchirico, James and Richard Newell (2003), “Catching Market Efficiencies: Quota-based Fisheries Management,” *Resources*, Spring (Issue 150), 8-11.

Sanchirico, James (2006), “Swimming Up Stream: The Challenges of Managing the World Fisheries,” *Resources*, Spring (Issue 162), 10-13.

#### Interesting URLs:

Commission for Environmental Cooperation (NAFTA)

<http://www.cec.org/home/index.cfm?varlan=english>

[http://www.cec.org/pubs\\_docs/scope/index.cfm?varlan=english&ID=14](http://www.cec.org/pubs_docs/scope/index.cfm?varlan=english&ID=14)

### ***Session 12 (July 17)***

*Required reading:*

Pearson, Charles (2000), Chapter 16, “Perspectives on Sustainable Development”

Supplemental reading:

Solow, Robert (1993), “An Almost Practical Step Toward Sustainability,” *Resources Policy*, 19, No. 3 (September), 162-172.

Hubbert’s Peak (Oil Transition)

Greene, David L. (2007), *Modeling the Oil Transition: A Summary of the Proceedings of the DOE/EPA Workshop on the Economic and Environmental Implications of Global Energy Transitions*, ORNL/TM-2007-014

United States Government Accountability Office (2007), *Crude Oil: Uncertainty about Future Oil Supply Makes It Important to Develop a Strategy for Addressing a Peak and Decline in Oil Production*, GAO-07-283.

**Session 13 (July 19)**

*Required reading:*

Pearson, Charles (2000), Chapter 17, “Measuring Sustainable Development”

Supplemental reading:

Kenneth Arrow, Partha Dasgupta, Lawrence Goulder, Gretchen Daily, Paul Ehrlich, Geoffrey Heal, Simon Levin, Karl-Göran Mäler, Stephen Schneider, David Starrett and Brian Walker (2004), “Are We Consuming Too Much?” *Journal of Economic Perspectives*, 18, No. 3 (Summer), 147-172.

Banzhaf, Spenser (2003), “Accounting for the Environment,” *Resources*, Summer (Issue 151), 6-10.

Lange, Glenn-Marie (2003), “Policy Applications of Environmental Accounting,” The World Bank Environment Department, Environmental Economics Series, Paper No. 88

Wagner, Gernot (2001), “The Political Economy of Greening the National Income Accounts,” *AERE Newsletter*, 21, No. 1 (Winter), 14-17.

World Bank (2006), *Where is the Wealth of Nations?*

Environmental Kuznets Curves

Susmita Dasgupta, Benoit Laplante, Hua Wang and David Wheeler (2002), "Confronting the Environmental Kuznets Curve," *Journal of Economic Perspectives*, 16, No. 1 (Winter), 147-168.

Interesting URLs:

United National Environment Program: Environment and Trade Branch  
[http://www.unep.ch/etb/areas/VRC\\_index.php](http://www.unep.ch/etb/areas/VRC_index.php)

***Session 14 (July 24)***

*Required reading:*

Pearson, Charles (2000), Chapter 19, "Looking Back, Looking Forward"

*Supplemental reading:*

Paul R. Portney (2000), "Environmental Problems and Policy: 2000–2050," *Journal of Economic Perspectives*, 14, No. 1 (Winter), 199-206.

***Session 15 (July 26)***

*FINAL EXAM*

**Some Policies for ITRN 701**

Exams are not "open book" or "open notes."

There is no "extra work" that can be done for "extra credit."

Students are responsible for obtaining notes from other class members if they miss a class.

The GMU honor code will be enforced. To be more specific: If I can show that a student cheated on an exam, that student will fail the course.

**SPP Policy on Plagiarism**

The profession of scholarship and the intellectual life of a university as well as the field of public policy inquiry depend fundamentally on a foundation of trust. Thus any act of plagiarism strikes at the heart of the meaning of the university and the purpose of the School of Public Policy. It constitutes a serious breach of professional ethics and it is unacceptable.

Plagiarism is the use of another's words or ideas presented as one's own. It includes, among other things, the use of specific words, ideas, or frameworks that are the product

of another's work. Honesty and thoroughness in citing sources is essential to professional accountability and personal responsibility. Appropriate citation is necessary so that arguments, evidence, and claims can be critically examined.

Plagiarism is wrong because of the injustice it does to the person whose ideas are stolen. But it is also wrong because it constitutes lying to one's professional colleagues. From a prudential perspective, it is shortsighted and self-defeating, and it can ruin a professional career.

The faculty of the School of Public Policy takes plagiarism seriously and has adopted a zero tolerance policy. Any plagiarized assignment will receive an automatic grade of "F." This may lead to failure for the course, resulting in dismissal from the University. This dismissal will be noted on the student's transcript. For foreign students who are on a university-sponsored visa (eg. F-1, J-1 or J-2), dismissal also results in the revocation of their visa.

To help enforce the SPP policy on plagiarism, all written work submitted in partial fulfillment of course or degree requirements must be available in electronic form so that it can be compared with electronic databases, as well as submitted to commercial services to which the School subscribes. Faculty may at any time submit student's work without prior permission from the student. Individual instructors may require that written work be submitted in electronic as well as printed form. The SPP policy on plagiarism is supplementary to the George Mason University Honor Code; it is not intended to replace it or substitute for it. (<http://www.gmu.edu/facstaff/handbook/aD.html>)