Global Climate Change (Y45.2095)

New York University
School of Continuing and Professional Studies
M.S. Program in Global Affairs

Spring 2009
Mondays 6:30 – 9:10 PM

William F. Hewitt
hours by appointment
(212) 799-0760
Bill@HewittComm.com or wh316@nyu.edu

Course Description

"Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level," according to the UN's Intergovernmental Panel on Climate Change.

Global warming is, according to the Pew Center on Global Climate Change, "… largely the result of emissions of carbon dioxide and other greenhouse gases from human activities including industrial processes, fossil fuel combustion, and changes in land use, such as deforestation."

"Scientific evidence shows that temperature changes are likely to have a profoundly negative impact on society, the global economy and the natural world," according to the "Financial Times."

Yes, there is considerable reason to be alarmed about the prospect of catastrophic climate change but there are also many reasons to believe that the world can effectively meet the challenges presented by climate change and not only surmount them, but prosper in the bargain.

Course Objectives

This course will examine the broad and deep science on climate change, the negative impacts and alarming prospects for much worse in a business-as-usual scenario, the history of the issue, the economics, the politics – both domestic and international, the policy debates and options, and the range of solutions available now and in the near future.

Using several recent books on the subject, a number of summaries from critical reports, and material from blogs and other online sources, as well as audiovisual resources and the climate change exhibit at the American Museum of Natural History, students will be exposed to a range of current critical issues relative to climate change.

Lectures will help elucidate key points but students will be required to take an active part in class discussion, will monitor the news and report on developments, and will write several papers, including a final research paper on which they will be asked to make a brief presentation in class. Three quizzes will be administered.

The course will cover climate change in several segments:
Science and Impacts – Classes 1 through 3
History – Class 4
Economics – Classes 5 and 6
Politics and Policy – Classes 7 through 9
Solutions – Classes 10 through 12
Nonsolutions, plus Conclusion and Review – Class 13
Final Paper Presentations – Class 14

Assignments and Grading

Students will be expected to attend each class, having done the assigned reading prior to class, and be fully prepared for discussion. Further, students will be required to find one relevant media story every week, write a one or two-paragraph summary, and be prepared to make a brief presentation in class. The story and summary will need to be submitted to the professor at the end of each class.

Three quizzes will be administered during the term. Quizzes will have multiple choice, true/false and fill-in-the-blank questions. (No essays.)

Two short papers (3 to 5 pages) will be assigned. Topics to be announced.

A final formal research paper (15-20 pages) will be required. A one-page proposal with draft bibliography will be due well before the paper is due. Students will be required to make a presentation of their paper during the last class.

- class participation, including media story summaries – 25%
- three quizzes – 30% (10% each)
- two short papers – 20% (10% each)
- final research paper and presentation – 25%

Reading List and Other Resources

The three books listed here, by Kolbert, Kelley, and Krupp and Horn, need to be purchased or otherwise obtained in print. All the other reading material will be available on line.

Field Notes from a Catastrophe: Man, Nature, and Climate Change by Elizabeth Kolbert, Bloomsbury Publishing Plc, December 2006

Energy in America - A Tour of Our Fossil Fuel Culture and Beyond by Ingrid Kelley, University of Vermont Press-University Press of New England, 2008

Earth: The Sequel - The Race to Reinvent Energy and Stop Global Warming by Fred Krupp and Miriam Horn, W.W. Norton & Co. Inc, March 2008

Other Required Reading Material

"Climate Change 2007: Synthesis Report - Summary for Policymakers" and "Glossary" – from the Intergovernmental Panel on Climate Change (IPCC)

"Climate Change 2007: Working Group I Report, The Physical Science Basis - Summary for Policymakers" – from the IPCC

"Climate Change 2007: Working Group II Report, Impacts, Adaptation and Vulnerability - Summary for Policymakers" and "Chapter 17: Assessment of Adaptation Practices, Options, Constraints and Capacity" – from the IPCC

"Climate Change 2007: Working Group III Report, Mitigation of Climate Change - Summary for Policymakers" – from the IPCC

"Understanding and Responding to Climate Change" from the National Academies

"The Darkening Sea" by Elizabeth Kolbert from "The New Yorker" 11/20/06

"The First Ten Years" from the United Nations Framework Convention on Climate Change (UNFCCC)

"Stern Review: The Economics of Climate Change - Executive Summary" – from the UK Government

"The Business of Climate Change II" by John Llewellyn and Camille Chaix, from Lehman Brothers

"Getting REDD Right - Reducing Emissions from Deforestation and Forest Degradation (REDD) in the United Nations Framework Convention on Climate Change (UNFCCC)" from Environmental Defense Fund, Woods Hole Research Center and Instituto de Pesquisa Ambiental da Amazônia (IPAM)

"The Impacts Of Biofuels On Greenhouse Gases: How Land Use Change Alters The Equation" by Tim Searchinger for the German Marshall Fund of the United States

"Cool Farming: Climate impacts of agriculture and mitigation potential" from Greenpeace

"Proposals for contributions of emerging economies to the climate regime under the UNFCCC post 2012" from Ecofys and Wuppertal Institute

"The Green Building Movement" by Bill Hewitt from the FPA

"Current Concerns" by Bill Hewitt from "Planning"

World Alliance for Decentralized Energy (WADE), selected articles on distributed generation

"Nuclear power in a warming world - Assessing the Risks, Addressing the Challenges" from the Union of Concerned Scientists

World Changing (http://www.worldchanging.com), selected articles on geoengineering

Other Resources
"Climate Change," a blog of the Foreign Policy Association - http://climatechange.foreignpolicyblogs.com/

"Climate Change" – an exhibit at the American Museum of Natural History

Frontline specials: "Heat" and "Hot Politics"

Guest speakers may also address the class.

Supplemental Reading (optional)
- *Big Coal: The Dirty Secret Behind America's Energy Future* by Jeff Goodell, Houghton Mifflin Company, April 2007
- *The Prize: The Epic Quest for Oil, Money, and Power* by Daniel Yergin, Simon & Schuster, 1993
- *Cape Wind: Money, Celebrity, Class, Politics, and the Battle for Our Energy Future on Nantucket Sound* by Wendy Williams and Robert Whitcomb, PublicAffairs, 2007

Class Sessions

Assigned reading is to be done **prior** to class. Each student will hand in a media story and their short summary of it at each class and be prepared to make a short presentation. We will be viewing graphic material and videos on a regular basis. Students will be expected to take part in discussion.

Class 1 (Jan. 26) – Overview of global climate change issues; plus a look at the science. (No media story this week.) Reading: *Field Notes from a Catastrophe*

Class 2 (Feb. 2) – Further examination of the major issues and further look at the science. Reading: "Understanding and Responding to Climate Change," "Synthesis Report – SPM," and "WGI Report – SPM"

Class 3 (Feb. 9) – Changes in natural and managed systems, now and for the future. Reading: "WGII-SPM" and "The Darkening Sea"

Class 4 (Feb. 23)– History and structure of international response to the threat of global climate change. Reading: "The First Ten Years." Quiz #1.

Class 5 (March 2) – Evidence of economic impacts of climate change and economics of stabilizing greenhouse gases. Reading: "The Stern Review" and "WGIII-SPM." Short Paper #1 due.

Class 6 (March 9) – Design, implementation and cooperation on economic mechanisms to fight warming. Reading: "The Business of Climate Change II"

Class 7 (March 23) – How We Get Our Energy. Reading: *Energy in America* (introduction through Ch. 2)

Class 8 (March 30) – Forests, Biofuels and Agriculture. Reading: "Getting REDD Right" and "The Impacts Of Biofuels On Greenhouse Gases" and "Cool Farming." Research paper proposal due.

Class 9 (April 6) – Confronting the special interests, dealing with the "Skeptics," and addressing concerns of developing nations. Reading and viewing: The videos of "Heat" and "Hot Politics" plus selected readings from the websites, as well as "Proposals for contributions of emerging economies to the climate regime under the UNFCCC post 2012" (pp. 5-20, 138-140). Quiz #2.

Class 10 (April 13) – Solutions: adaptation; mitigation with renewable energy. Reading: "WGII Report-Chapter 17" and *Energy in America* (Ch. 4 and 5) and *Earth: The Sequel* (Ch. 1 through 4). Short Paper #2 due.

Class 11 (April 20) – Solutions: more renewables and other clean tech. Reading: *Earth: The Sequel* (Ch. 5 through 7, 9 and 10)

Class 12 (April 27) – Solutions: green building, energy efficiency and reducing consumption, the Smart Grid, distributed generation, and low-tech. Reading: "The Green Building Movement," *Energy in America* (Ch. 3), "Current Concerns," WADE articles, and select items from FPA "Climate Change" blog.

Class 13 (May 4) – Red Herrings: Clean Coal, nuclear power and geoengineering. Also, conclusion and review. Reading: *Earth: The Sequel* (Ch. 8) and "Nuclear power in a warming world" and several readings from World Changing on geoengineering. Quiz #3.

Class 14 (date to be determined) – Research Paper due and presentations in class. (No media story this week.)

Class Business

Papers - All student papers must be submitted electronically using the Blackboard Digital Drop-Box capability and to the professor in hard copy form. Late papers will be penalized. Papers will not be accepted after one week.

Media stories - These will be submitted in hard copy in class.

Incomplete Policy - Incompletes are only granted in extreme cases such as illness or other family emergency and only where almost all work for the semester has been successfully completed.

Extra Credit - There is no provision for extra credit.

Attendance and Lateness - All students must attend class regularly. If you need to arrive late or leave early, please inform the professor beforehand. Any more than two absences (with an explanation or not) will likely lead to a need to withdraw from the course or a failing grade. Your contribution to the discussion is essential to the success of the course.

Decorum - The use of texting devices is not allowed in class. Laptops may be used for the purpose of taking notes.

Academic Integrity - Please be aware of the "SCPS Statement on Academic Integrity and Plagiarism." See the SCPS definition of plagiarism:

> Plagiarism is presenting someone else's work as though it were one's own. More specifically, plagiarism is to present as one's own a sequence of words quoted without quotation marks from another writer; a paraphrased passage from another writer's work; creative images, artwork, or design; or facts or ideas gathered, organized, and reported by someone else, orally and/or in writing and not providing proper attribution. Since plagiarism is a matter of fact, not of the student's intention, it is crucial that acknowledgement of the sources be accurate and complete. Even where there is no conscious intention to deceive, the failure to make appropriate acknowledgment constitutes plagiarism. Penalties for plagiarism range from failure for a paper or course to dismissal from the University.