Greetings from the Environmental Management II Instructors and Teaching Assistants:

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This week's lecture presentation from Harvard Hall is now online in streaming audio-video format with synchronized slides. Follow the links below to view the current lecture and assignments.

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W E E K 11
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GREENHOUSE EFFECT

Professor Petros E. Koutrakis, Ph.D.

The Sun radiates tremendous energy upon the Earth. Our planet's atmosphere traps some this radiation as heat, and reflects the rest into space. The concentration of certain gases in the atmosphere such as CO2 (Carbon Dioxide), NOx (Nitrogen Oxides), CH4 (Methane), CFCs (Chloroflorocarbons) and water vapor determines how much heat will be trapped. The warming of the Earth due to rising levels of so-called 'Greenhouse Gases' is called 'The Greenhouse Effect'. Most scientists agree that concentrations of greenhouse gases and the average mean temperature are on the rise. Extensive research based on analysis of ice core samples with trapped air bubbles in ancient polar ice, and direct measurements taken at Hawaii's Mona Loa Observatory confirm the increase. Although scientists agree on the facts, they do not all agree on what the data means. Some researchers insist that the 'Greenhouse Effect' is not caused by new anthropogenic sources of greenhouse gases. They believe instead that the warming of the Earth is simply the normal cycle of temperature oscillations over time.

The United States produces 20% of all greenhouse gas emissions, with the former Soviet Union and the European Union responsible for 14% each. Emissions from developing nations such as China, India, and Brazil are rising sharply. Overall atmospheric levels of carbon dioxide are expected to double this century to 600 PPM. This calculation assumes a static growth rate of 0%. Over the last 8 years the rate of growth of the US economy has been 4% per year. If this trend holds, atmospheric levels of CO2 could rise to 1200 PPM -- a 400% increase over the next 100 years.

The effects of this atmospheric warming could be severe. Adverse impacts include coastal flooding, habitat change, crop destruction and more extreme
weather patterns. Temperatures have risen only a degree or so in the last century and some of these effects are beginning to be felt. To put this temperature change in perspective, during the most recent ice age 10-20,000 years ago when ice was a mile thick over Boston, average global temperatures were only 3-4 degrees cooler that today.

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Video Lecture, Assignments, and Readings for Week 11
http://lab.dce.harvard.edu/extension/environment/week11em2_new.html

Weekly Feedback Assignment (All Students)
http://lab.dce.harvard.edu/extension/environment/distance-students/feedback-frameset.html

NEXT CLASS -- April 17, 2002

URBAN AIR POLLUTION
Professor Petros E. Koutrakis, Ph.D.

Key Links:

Environmental Management II Course Website (Home Page)
<http://lab.dce.harvard.edu/extension/environment/em2.html>

General Help Information
<http://lab.dce.harvard.edu/extension/environment/HelpResources.html>

Personalized Help via Email from Teaching Assistant
<http://lab.dce.harvard.edu/extension/environment/E126ask-the-TA.html>

Help with Passwords
<http://lab.dce.harvard.edu/extension/environment/passwords.html>

Syllabus
<http://lab.dce.harvard.edu/extension/environment/syllabus2.pdf>

Current Week's Lecture
<http://lab.dce.harvard.edu/extension/environment/autoselect.html>

Upcoming Lectures (Video Index)
<http://lab.dce.harvard.edu/extension/environment/video-lectures-em2.html>

Environment News:

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THE HARVARD ENVIRONMENT NETWORK BULLETIN
A weekly calendar of environmental events for the greater Boston community
<http://environment.harvard.edu/lists/archives/hen%2Dl/index.html>

EPA GREENBYTES NEWSLETTER
<http://www.epa.gov/ne/ra/gb/index.html>
SEMINARS
A guide to environmental research, education and outreach at Harvard University
<http://environment.harvard.edu/envath/seminars.html>

CONFERENCES
<http://environment.harvard.edu/lists/archives/envconfs%2Dl/index.html>
An electronic mail discussion list for environmental event, conference, and publication opportunity announcements

JOB OPPORTUNITIES
An electronic mail discussion list for environmental job and educational opportunity announcements
<http://environment.harvard.edu/lists/archives/envjobs%2Dl/index.html>

Software for Viewing Lectures and Assignments:
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Internet Explorer (5.5):
<http://www.microsoft.com/windows/ie/>

Realplayer 8 (Basic):
<http://www.real.com/player/index.html>

Adobe Acrobat Reader:

Back Issues of the Course Newsletter
<http://lab.dce.harvard.edu/extension/environment/newsletter.html>

Password Access for Registered Students:
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Passwords are required to access streaming audio-video lecture presentations beginning with week 03.

Registered Harvard students of Environmental Management are authorized to view the materials during the current semester. After selecting the appropriate video link, a popup window (see above) will prompt you to enter a user name and password.

For USER NAME, enter your Harvard University ID (HUID) number. It is typically an 8-digit number that begins with '001'. This number was assigned to you by the Registrar and appears on your registration confirmation. All students should have received this information by mail. (This letter has information about the computer accounts which are available to registered students.) If are a Harvard employee, please note that the HUID # is NOT the same as your employee number. It is also not the same as any Harvard PIN you might have, such as the one used for DCEWEB.

For PASSWORD, enter your last name (all lowercase letters). Only eight (8) characters are allowed, so if your name is longer (i.e. Washington), use only the first 8 letters (washingt).
If you have not received, or cannot locate, your HUID you can contact the Registrar's office.

Harvard Registrar (DCE)
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Cambridge, MA 02138
(617) 495-4024

Harvard Extension School Distance Education Program

COURSE NEWSLETTER FOR ENVR E-102 CRN-21783
Environmental Management II
Petros E. Koutrakis, Ph.D., and John D. Spengler, Ph.D.

Classes meet at Harvard Wednesdays 7:35pm-9:30pm
Harvard Hall 104 - Harvard Yard
Streaming Media Presentation online by the next Monday

Environmental Management I & II Web Sites
http://lab.dce.harvard.edu/environment/

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Course web site questions

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[NOTE: Environmental Management uses the List Server designated 'NSCIE126' for both Fall and Spring term classes. This Newsletter was prepared for students of Environmental Management II, ENVR E-102, CRN 21783.]

For subscribe/unsusbscribe instructions, see:
<http://lab.dce.harvard.edu/extension/environment/ListServer.html>