

# CE 591 – Environmental Engineering Seminar

## Addressing the World's Sustainability Needs

### *The Future Begins Now*

#### Description

If Earth is to successfully support our ever-increasing populations and expanding industrialized nations, engineering professionals must adopt sustainable design.

This challenge will touch all aspects of engineering activities, including:

- material and energy resource selection and conservation
- building design and construction methods
- environmental control technologies
- transportation system design and operations
- the design and operation of manufacturing processes

Because engineers do not work in a vacuum and they are intrinsically linked with both the social and economic aspects of their designs, these engineering activities are just as paramount as the technical challenges of any sustainable design.

What are engineering companies doing now to meet these challenges? Where is the future of engineering design, construction and operation heading? What does sustainability mean? To help answer these questions, engineering professionals with close links to WPI are collaborating to deliver this 15-week offering to address these issues through case studies of their sustainable design activities.

#### Who Should Attend

Graduate students registered for CE591 (All Disciplines), outside professionals seeking information and PDH credit, and the general public with interest in how engineers are meeting the challenges of sustainable design.

#### Format of Course

Each week a different engineering subject matter expert will deliver a one-hour presentation followed by a class project (and later take-home assignment). Projects will be completed either as groups or individually, depending on the type of assignment. The speakers will be available during the class project hour to answer questions regarding the presentation and the assignment.

6:30 p.m. – 7: 30 p.m. *Presentation*

7:30 p.m. – 8:30 p.m. *Class Project*

8:30 p.m. – 9:30 p.m. *Review previous week*

#### Organizer

Professor Frederick L. Hart, WPI Civil and Environmental Engineering

[www.wpi.edu/+CEE/](http://www.wpi.edu/+CEE/); 508-831-5421

#### Dates and Location

15 Thursday Evenings beginning January 22 through April 30, 2009, Salisbury Lab, RM 305 WPI Campus

#### Fee

\$50 per Weekly Presentation Only

\$150 per Weekly Presentation & Project - 2 PDH

To register for weekly lecture and class project, go to <http://cpe.wpi.edu/Individual/Workshops/regform.html> or call 508-831-5517.

To register as a Graduate Course:

<http://grad.wpi.edu/Admitted/coursereg.html>

or call 508-831-5301

For more information:

<http://www.wpi.edu/About/Sustainability/design.html>

Topic	Speaker	Company	Date Thursday Evenings
Sustainability: Market Drivers Shaping the Future of Engineering	Tom A. Pedersen Senior Vice President, Director of Sustainability	<a href="#">CDM</a>	January 22, 2009
Carbon Credits	Richard K. Allen, PE Senior Vice President	<a href="#">Stantec</a>	January 29, 2009
Sustainable Design Case Study – Harvard University	Jacquelynn Henke, LEED AP Manager for Sustainability	<a href="#">Alston Development Group</a>	February 5, 2009
Using Integrated Project Delivery to meet your Sustainability Goals	Rod Shaffert, LEED AP Vice President, Scholastic Division	<a href="#">Cutler Associates</a>	February 12, 2009
Sustainable Site Designs	Chelsea R. Christenson, PE, LEED AP Senior Project Engineer and Amy LeBlanc, EIT, LEED AP Project Engineer	<a href="#">Nitsch Engineering</a>	February 19, 2009
Exploring The Potential For Hydropower	Frederick A. Mueller, P.E.	<a href="#">Tighe &amp; Bond</a>	February 26, 2009
KPI, GRI, Green Labeling and Certifications (LEED) – Unscrambling the Green Gobbledygook!	Lina Azuero	<a href="#">CDM</a>	March 5, 2009
Geothermal: A Resource for Energy Efficiency and Carbon Footprint Reduction	Paul F. Ormond, P.E. Senior Engineer	<a href="#">Haley &amp; Aldrich</a>	March 12, 2009
Sustainable Water Reclamation	Peter Tunnicliffe, P.E., BCEE, DBIA, CIRM Senior Vice President	<a href="#">CDM</a>	March 19, 2009
Green Buildings Require an Integrated Design Approach	William J. Schlageter, Jr., PE Principal	<a href="#">Stantec</a>	March 26, 2009
Plant energy usage: a detailed analysis	David Bouffard CEM, LEED AP	<a href="#">Woodward &amp; Curran</a>	April 2, 2009
How to Make Your Office Sustainable	Kenneth Page , P.E., BCEE Senior Vice President	<a href="#">CDM</a>	April 9, 2009
Energy Efficiency In Buildings	Christopher Schaffner, PE, LEEDR AP, USGBC LEED Faculty TM Consultant	<a href="#">The Green Engineer, LLP</a>	April 16, 2009
Energy Optimization	Pat Clifford and Joerg Blischke	<a href="#">AECOM</a>	April 23, 2009
Nuclear Power – Enabling a Sustainable Future	Robert N. Katz, Ph.D. Research Professor	<a href="#">WPI/ME Department</a>	April 30, 2009

For more information <http://www.wpi.edu/About/Sustainability/design.html>