New York University
Department of Urban Design and Architecture Studies

Environmental Design
V43.0034 Spring, 2007
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Course Goals
This course is designed to give an in-depth understanding of the history, development and direction of design for environmental sustainability, with a focus on architecture and urban planning. We will begin with the history of attitudes to the landscape and nature in Europe and Asia, moving into the development of American landscapes, cities and suburbs. We will then study historical and technological advances which facilitate the design of sustainable buildings, streetscapes, and landscape; we will also discuss methods for evaluating and documenting the ecological impact of such advances. Numerous case studies will be analyzed to understand practical applications of theoretical principles. The aesthetic and social impact of new construction and site development on the natural and man-made eco-system will be the focus of discussions, including current events. There will also be field trips and some guest lecturers in specialized topics.

Course Requirements
Grades will be based on attendance, class participation, short written assignments, the mid-term project, and the final presentation. These elements will be weighted as follows:

Attendance and Class Participation	40%
Mid-term Project	25%
Final Presentation	35%

Required reading is drawn from several books and a selection of articles from professional journals, periodicals and newspapers. It is important to check Blackboard prior to each class for postings of recent articles in the press.

The Mid-term Project involves the analysis of a building or large designed landscape with a view to evaluating the sustainable components of the design. The final project will build upon the mid-term evaluation by proposing ways to improve the ecologically sustainable aspects of a selected or proposed design. What sustainable elements can be added to increase the positive impact of the man-made structure on the natural environment? What elements must be deleted from the design for reasons of cost or technical short-comings? How would you like to have designed the project differently? More detailed requirements for these projects will follow.

Classes will be held at 180 Varick Street, 11th floor, unless noted otherwise in advance.

Course Schedule 2007- Updated March 20, 2007
Class Session One **Introduction to Environmental Theory and Design**
January 16
Overview of course direction
Introduction of design concepts
Definitions and Applications of Sustainable Design
Visit to the Center for Architecture

Class Session Two

History of Landscape Design, Early Town Planning; National Parks and the Environmental Ethic
January 23
French, English, Italian and American Approach to the Landscape; American Town Planning; development of the National Parks; environmental philosophy
Read for Discussion:
Rogers, p. 222-230, 417-427; Newton p. 517-537; Leopold, "The Land Ethic"; Stegner, "Capsule History of Conservation"; Berry "God and Country" and "Word and Flesh."

Class Session Three
Post-War Developments in America
January 30
Ecology and Urban Planning; Suburban Sprawl versus Smart Growth; New Urbanism
Read for Discussion:
Spirn p. 3-5, 62-87; Lynch, p. 1-13, 46-90; Rogers, 477-486; Carson, Chapters 2,6;
Jacobs. P. 50-54 and Chapter 7.

Class Session Four Innovations in Technology
February 06
Photovoltaics, Solar Collectors, Wind Farms, Geothermal, Insulation, Daylighting, etc.
Guest Speaker: David White, Transsolar
Read for Discussion:
Architectural Record 07.05 and 11.05; Wines, p. 64-77, 146-160; "More Profit Less Carbon" and "Mr. Green"

Class Session Five Green Houses and Housing
February 13
How can technological advances be applied to urban and suburban houses and to affordable housing?
Guest Speakers: Robert Garneau of Grimshaw and Adam Watson of Dattner Architects
Read for Discussion:
Stang and Hawthorne p. 10-17; Buchanan, p. 102-111; Via Verde; Plug & Play Construction; Swedish House; Washington Cabin;"Affordable Housing Goes Green"
Wines, p. 78-101, 161-183

Class Session Six Green Roofs
February 20
Read for Discussion:
Earth Pledge, p. 10-23,28-29, 42-43, 50-51, 58-59, 106-107, 130-136;
Gotham Gazette Oct 2005; "Making Green Roofs Simple;" Metropolis, Sept. 2006

Class Session Seven Mid-Term Presentations and Sustainability Proposal
February 27

Class Session Eight Criteria for Evaluating Projects
March 6
US Green Building Council; LEED Ratings; AIA Committee on the Environment;
Read for Discussion:
Architectural Record 06.05; Buchanan, p. 30-39; review of technical terminology

Spring Break No Class
March 13

Class Session Nine **Green Commercial and Institutional Buildings**
March March 20
How can commercial and institutional buildings enhance the environment?
Read for Discussion: Buchanan, p. 46-55, 62-67, 90-95; "Thought Bubble," Metropolis, Feb 2006; "Four Shades of Green;" "Prairie Ridge Ecostation" and "Warren Skaaren Environmental Center" in Architectural Record 11/2006; "The Crystal Method" in The Architect's Newspaper, Sept. 11, 2006

Class Session Ten **Green New York City**
March 27
Guidelines for Ground Zero, NYC Green Building Law; NYC Green Building Competiton
Read for Discussion:
New York Times, Dec. 11, 2005; High Performance Infrastructure Guidelines; PLANYC2030; "Nine Ways to Transform New York;" "Pipe Dreams"

Class Session Eleven **Life Cycle Analysis, Waste Management,**
April 03 **Recycling, Storm Water, Conservation**
How can the process of design reduce the consumption of raw materials and energy?
How can we minimize the adverse impact of civilization's detritus?
Read for Discussion:
Spirn, p. 129-168; Newton, p. 659-674; "The Last Drop", New Yorker, Oct. 23, 2006
Lovins, Scientific American 09.05; "Egads"

Class Session Twelve **Field Trip**
April 10
Class Trip to the Queens Botanical Garden
Guest Speakers: Joan Krevlin of BKSK Architects and Jennifer Ward of QBG
Reading:

Class Session Thirteen **Public Space, Urban Public Art, Land Art**
April 17
Fresh Kills, The High Line, Groundswell, Andy Goldsworthy, and other artists
Read for Discussion:
Groundswell, p. 14-31; nyc.gov/freshkills; thehighline.org; "In Houston, Art is Where the Home Is" NY Times, Dec. 17, 2006

Class Session Fourteen **Final Student Presentations**
April 24

Class Session Fifteen **Final Student Presentations**
May 01