

New York University
Robert F. Wagner Graduate School of Public Service

Advanced Topics in Urban Design – Tools for Sustainability
P11.2680 (001) Spring 2010

Building on the skills introduced in Introduction to Urban Design (P11.1620) this course will concentrate on developing an understanding of how to develop a design methodology that includes the use of digital, analytical and graphic tools to enhance their knowledge of sustainable urban design. The focus will be on urban spaces and communities in the New York City area and region. Work will be split between individual and group work; enabling students to enhance their own knowledge of the design techniques and methods while the group work will allow for development of the iterative design process necessary for sustainable urban design solutions.

Monday 6:45pm-----8:25pm
Room 207, 194 Mercer Street
Instructors: Claire Weisz, Adjunct Associate Professor, Eric Galipo

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Class Format

The format of the course will be a mix of instructor and guest presentations, discussion sessions, field trips and studio work. Students will be required to keep field notes and sketch in a sketchbook, photograph with a digital camera and will be encouraged to develop skills in freehand drawing and diagramming. The class will be introduced to more advanced computer graphics programs that develop three-dimensional massing and rendered presentation views (specifically SketchUp, GIS/Illustrator, Photoshop and Powerpoint). Lab times will be scheduled for additional help with these programs.

Studio Projects

A series of design exercises (short design problems) and a single larger urban design problem will be assigned during the semester. The assignments will be based on the demands required for urban design as it is practiced professionally and will be structured to describe design issues such as scale, program, context, infrastructure and environmental factors. Students will complete the small design problems individually whereas the terminal urban design project will be accomplished by teams of three or four, with each group presenting their findings to the entire class for critique. The design problems will increase in scale from the start to end of the semester.

Workshops and Field Trips

The course in Spring 2010 will center around studies of Lower Manhattan and the class will have a scheduled field trip that students will participate in scheduled on a Sunday. In addition as outlined in the course description computer workshops will be integrated into the class.

Research Project

A review and analysis of a competition or an unbuilt urban design plan will be required. This will be required to be submitted as a digital presentation before spring recess.

Course Grading:

Design Exercise 1	10% of final grade
Design Exercise 2	10% of final grade
Design Exercise 3	20% of final grade
Spring Term Project #3	40% of final grade
Research Presentation/Class Discussions –	20% of final grade

Readings

There are no textbooks for this class. Instead, supplementary reading handouts will be posted to blackboard every second week will be drawn from contemporary news reports and critical journals to provide background. These readings will be discussed in the following class session. Class participation during discussions is highly recommended. We reserve the right to raise or lower the final grade one-half letter grade to reflect participation.

In addition some of the following books are suggested reading and will be referred to by the Professor during the semester. Students should make themselves familiar with these titles.

Defensible Space Crime Prevention Through Urban Design, Oscar Newman originally published 1972 by McMillan Publishing Company 264 pp

The Elusive City, Five Centuries of Design Ambition and Miscalculations, Jonathan Barnett, originally published 1986 by Harper & Row. 210 pp

Towards a New Architecture, Le Corbusier translated from the French by Frederick Etchells first published in 1927 by Architectural Press London 269 pp

Collage City Colin Rowe & Fred Koetter, originally published in 1978 MIT Press 185pp

A View From The Compidoglio, Robert Venturi and Denise Scott Brown originally published in 1984 by Harper and Row. 154 pp

The Architecture Of The City, Aldo Rossi, translated from Italian by Joan Ockman and Diane Ghirardo, 1984 MIT Press 208 pages

Required Software

In lieu of text book purchases for this class, you are to purchase:

Adobe Creative Suite (CS4) Design Standard Edition

Adobe CS4 is available at the NYU computer store for purchase for 220\$ -- a significantly reduced price available only for students. Adobe CS4 include full versions of Photoshop, Illustrator, InDesign and Adobe Acrobat, which will all be necessary tools for this course.

Since we will be going over certain computer exercises and functions in class, you may bring your laptop to class to follow along with exercises or instructional demonstration.

Additional lab time and office hours (TBD) will be available to assist students with specific issues, provide further instruction, and provide feedback on plans in development.

Note: Current versions of the software are also available at the NYU computer labs. However, if you opt to use public facilities rather than purchase the software, the same level of quality, attention and collaboration with your peers is expected. The lack of availability of lab space, computers or technical issues resulting from differences in software versions at the NYU labs will not be acceptable reasons for failure to submit assignments in on time, nor for a reduced level of quality.

Guest Lecturer and other Events

We have invited several guest lecturers to present to the class who are familiar with our study area and have special expertise on national and international topics in sustainable economic development, environmental issues and landscape and sustainable urban design. These class lectures will occur in the first 20 minutes of class with 10 minutes for the lecturer to take questions. In addition we will be posting on blackboard and announcing in the class special lectures and exhibitions on urban design that are strongly recommended for students to attend.

2010 In Class Lecture Series

Feb 22nd Claudia Herasme, NYC Department of City Planning

March 1st Eve Michel FAIA,

March 8th Jeffrey Raven AIA AICP

March 22nd Laura Starr Starr Whitehouse Landscape Architects

March 29th Kate Wood, Landmark West! Columbia University GSAUPP

April 5th David Quart NYCEDC

April 12th Craig Dyckers Snohetta

April 19th – Lori Mazor AIA, VP Planning New York University

Course Outline SPRING 2010

The first six week period will be composed of shorter design problems and the development of a methodology for using digital technology in urban design.

January 25 / Lab scheduled - Readings issued

Week 1 – Introduction - Design Process - The Aerial Photo and The Computer #1

Discussion:

Course schedule and grading requirements will be explained. Method of relationship between size, scale of development and aerial views will be discussed. Class exercise in visualization and analysis will be given during class and homework assigned. The goal of this unit is to develop tools to analyze existing conditions quickly and to develop a multi-dimensional sense of how a different design approach can influence all the statistics and metric of urban development.

Assignment:

Design Exercise #1:

Students will be required to redesign an area of the city from the aerial view – work will be presented in the class on 2.1.2010. Students will be familiarizing themselves with SketchUp and Google Earth as well as organizing and comparing basic urban design data such as density, population, scalar dimensions. Presentations will be 5 slides maximum demonstrating an understanding of making a design argument through simple means.

February 1/ Lecture by instructors

Week 2 – Design Process – The Camera and the Sketch #2

Due:

Design Exercise #1: Peer Review – Presentations will be 5 slides maximum demonstrating an understanding of making a design argument through simple means.
Reading Assignment from Blackboard

Discussion:

Steps in a typical design problem will be explained by way of reviewing the exercise handed out in the previous week. Students will see examples of design presentations that document existing conditions, analyze opportunities and constraints, develop alternative approaches, and forge consensus between stakeholders.

Students will be familiarizing themselves with digital photography, line drawings Photoshop, and photomontage techniques. Freehand and measured drawing techniques will be explained to enable students to record notes in class sketchbooks as well as techniques for taking and using photographs analytically and for design purposes. One and two point perspective drawing techniques will be discussed. The goal of this unit is to develop tools the student can use to efficiently evaluate what is happening “on the ground” and to start to understand changes in scale and the role of buildings and street details in urban design.

Assignment:

Design Exercise #2:

Students will be required to select two street views to photograph and be required to sketch the matching perspectival view by hand. Each student will prepare ‘existing’ sketches and sketches showing conceptual redesign. The sketches will be presented in class on 2.8.2010. Presentations will be 5 slides maximum demonstrating an understanding of making a design argument through street views and perspectives.

February 8/ Lecture by Instructors

Week 3 – Design Process – Design Process Urban Programming – the plan and section #3

Due:

Design Exercise #2: Peer Review – Presentations will be 5 slides maximum demonstrating an understanding of making a design argument through simple means.

Reading Assignment from Blackboard

Discussion:

The role of individual buildings and building orientation in urban design will be discussed through the review of students work with street level views and each student's analysis of the streets they have studied through.

Urban space programming will be explained through mapping techniques, plan and section diagrams, stakeholder interviews and writing of use scenarios. Methods of presenting program ideas will be discussed. Students will see examples of urban design plans using sectional and planar analysis in a variety of scales.

Techniques for using GIS to bring plan information and land use data into programs like Illustrator will be discussed. .

Assignment:

Design Exercise #3 and Research Assignment:

Students will learn how to describe urban spaces graphically in plan and section form, and to use drawings to compare the character of these spaces. Students will be asked to visit urban spaces in New York City and document the physical qualities of the space for use in their presentation at the class on 3.1.2010.

Research assignment will be discussed and students expected to hand in the subject they will be reviewing in class on 3.1.2010 and due 3.15.2010.

February 15 Presidents Day no classes

February 22

Week 4 – Urban Design and Planning Tools – guest lecturer

Due:

Reading Assignment from Blackboard

Design Exercise #3 – interim review – work will be discussed after class lecture.

Discussion:

Guest lecturer will discuss the kinds of projects and visualization tools that are used to plan cities.

Instruction will be given on methods for energy modeling and for sun and wind studies that are generated from plan and building massing models. Students will be required to go back to their design areas from the first design unit and advance their ideas in plan and section drawings (By instructors)

Assignment:

Design Exercise #3:

Will be reviewed and discussed for further development by each student. Final presentation of this assignment will be 3.01.2010.

March 1

Week 5 – Transportation, Economic Development and the Environment – guest lecturer

Due:

Design Exercise #3 – final review – will be presented in 5 slides using only plan and section to describe the design project.

Research Topic Proposal – due at beginning of class (no exceptions)

Discussion:

Guest lecturer will discuss projects in the site area and a history of investment in water and intermodal transportation. Traffic patterns, adjacent community development and security and access issues will be part of the discussion. The design of larger projects in Lower Manhattan will be discussed as well as the relationship between capitol projects and economic development. Challenges facing urban development on the water will be discussed. Students will present their Exercise #3 projects to the class.

Assignment:

Spring Term Design Project will be handed out and class will be divided into groups. Groups will be required to present their research on the waterfront condition of their site areas and document the physical qualities of the project area for presentation in class on 3.08.2010. .

March 8-

Week 6 - Energy, Building and other Environmental Factors – guest lecturer

Due:

Peer Review: Group Representative will present research on access and transportation improvements.

Reading Assignment from Blackboard

Discussion:

The importance of environment (sun, shade, wind) and economic incentives will be discussed at it relates to the physical design of cities. International examples will be cited and discussed. Recent examples of urban regeneration and new city design will be presented. Impact of regional transportation and urban utility infrastructure will be discussed. Impact of stormwater drainage, power generation, parking and mass transit access will be explained in the context of urban redevelopment. Masdar, Abu Dubai will be presented among other examples of global urban design under a sustainable model.

Assignment:

Groups will be required to present their research on current access and transportation improvements and on building and infrastructure in the site area and their analysis of the effects this has in the sustainability of the area for presentation in class on 3.22.2010.

March 15 – Spring Recess

Research power point presentations must be handed in for grading.

March 22

Week 8 – Lower Manhattan and the Landscape of Waterfront Cities – guest lecturer

Due:

Reading Assignment from Blackboard

Peer Review: Groups will present goals and objectives and their resultant strategies for improved transportation, and improvements to the carbon footprint of their site areas.

Reading Assignment from Blackboard

Discussion:

The importance of public networks and open space will be discussed as it relates to the physical design of cities. International examples will be cited and discussed. Current projects in Lower Manhattan that the lecturer is involved in will be presented.

Assignment:

Groups will be required to present their research on the role of landscape and green initiatives in their site area on 3.29.2010.

March 29

Week 9 – - Historic Preservation and Adaptive Reuse – guest lecturer

Due:

Peer Review: Group Representative will present research on building and infrastructure.

Reading Assignment from Blackboard

Discussion:

Historic Preservation

Historic buildings and districts can be important tools in anchoring urban design plans and developing strong communities. Examples of adaptive reuse of existing buildings and their impact on adjacent development will be discussed. Historic and adaptive reuse will be discussed related directly to the design project.

Implementation and Process

Community consensus building, public agency processes, and funding sources often have greater impact on the realization of an urban design project than the initial design itself. Examples of both large-scale and small-scale projects will be discussed where significant changes occurred during their design and construction.

Assignment:

Groups will be required to make presentation of their energy and infrastructure improvements as well as a phasing strategy in class on 4.5.2010.

April 5

Week 10 – Urban Renewal and Waterfront Planning – guest lecturer

Due:

Peer Review: Group Representative will present research on current project progress with regards to the goals and objectives and resultant strategies for open space and landscape improvements.

Reading Assignment From Blackboard

Discussion:

Large scale projects often emphasize regional connections and the logistics of movement. Land use, street network and public realm decisions are important factors in the development of large scale urban design projects. Students will review recent waterfront design efforts and discuss their transformation into valuable urban amenities

and show how they relate to their project.

Assignment:

Each team will make a project presentation of their progress in a 15 slide presentation organized from goals and objectives to specific block and building scale initiatives in class on 4.12.2010

April 12

Week 11 – Sustainability and Investment – guest lecturer

Due:

Peer Review: Full Group will present their progress in a 15 slide presentation organized from goals and objectives to specific block and building scale initiatives.

Reading Assignment from Blackboard

Discussion:

Human settlement has great variety as do the ways animals inhabit the planet. Craig Dyckers will lecture on his inspirations for design of large and new sites. Student will prepare for this class by researching new technologies in reclaiming brownfield lands, urban ecologies, and land and resource conservation are examples of sustainable principles impacting urban form.

Assignment:

Students will review green design concepts and recent urban projects incorporating sustainable principles and present the sustainability strategy for their projects. Each team will make a project presentation of their progress in a 15 slide presentation emphasizing the larger water, energy and land use initiatives in the plan.

April 19 – Lab to be scheduled

Week 12 – Representing Urban Design - guest lecturer

Due:

Peer Review: Full Group will present their progress in a 15 slide presentation organized around sustainability, water, land use, and energy initiatives.

No reading Assignment from Blackboard

Discussion:

This class will concentrate on reviewing the design tools groups are using to explore their goals and objectives for the study area. Urban design ideas will be discussed in class by the groups as they present their current schemes and materials they are developing. Critique and analysis and presentation of materials will aid in this discussion.

April 26

Week 13 – Big ideas come in many forms

Due:

Final Peer Review: Full Group will present their summary 22 slide presentation updating their visuals and proposals from the last review. These shall include drawings and

diagram that present an overview of the problem analyzed, goals and objectives, and your design strategies that illuminate the way in which your project will improve the sustainability of lower manhattan.

Discussion:

Each presentation will be critiqued in order to prepare for a final review.

Assignment:

Final Project Review May 3 - 22 slides per group.

May 3

Week 14 – Final Project Review – THE NEW LOWER MANHATTAN PLAN

Student teams will present their project designs to the class and to a selection of guest critics.

May 5 – READING DAY – NO CLASS

May 6-12

Week 15 – FINALS WEEK – All students will be given an opportunity for discussion of their work during the term and their interests.

End of Document – supplemental information will be handed out in class and posted to blackboard throughout the term.
