Course Syllabus ● Spring 2014
UP426: Urban Design and Planning

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Course Description

What many practicing planners do not often realize is that through their daily duties they are shaping the urban form of their cities, and in essence are more active urban designers than any other profession. Urban design is about creating neighborhoods, districts, cities and regions, extending far beyond yet being inclusive of architecture, streetscape, aesthetics and the design of a plaza or building. It is about arranging land uses, transportation networks and amenities in order to create a fabric that can foster healthy, functional and vibrant communities.

This course will explore the fundamentals of urban design as they relate to all scales of the built environment - including regions, cities, districts, neighborhoods, blocks and parcels - and will reinforce the basics of sound community planning. Focusing on the neighborhood and public space as the quintessential building blocks, we will explore how these cities and areas have changed, and how the advent of the automobile, rapid suburbanization, and past planning practices have created challenges for today’s planners and urban designers.

We will learn how to analyze and measure design, how to apply its principles, how to understand the design process of creating new areas and the fundamentals of retrofitting existing ones, and why connectivity and walkability are critical to healthy communities.

We will answer the question of how a planner can impact the design of a city positively without designing buildings, and what tools are available to implement urban design plans and policies. Lastly, through three student projects, we will introduce planning studio techniques and technologies and build presentation skills.

Objectives

To introduce students to the application of basic urban design;
to gain practice in the basic skills of urban design analysis;
to gain an appreciation of both the process and product of the design of the built environment;
to emphasize the need for planners to learn design, and designers to learn planning;
to provide practice in visual, graphic and spatial literacy.

Method

This course emphasizes an appreciation of experiential learning and the interdependence of procedural and substantive knowledge. Fundamental for experiential learning is the studio method, which is typical of all design schools, and often used in workshop courses elsewhere.

The studio method includes lectures, instructional sessions and discussion, but the emphasis is on student work. Learning by doing through exercises and projects is the focus that is supported by collaboration with colleagues in a cooperative, interactive milieu.

Lectures and discussions, enhanced by the extensive real-world professional experiences of the instructors, will be supplemented by multiple exercises and group projects that will provide students with practical experience for a fundamental understanding of urban design.
Student Projects, Exercises and Evaluation

Manual Graphic Exercises
Individual Work – 13% total
The tools for urban analysis may now seem be mostly digital, but there continues to be a need for manual graphic skills. From taking notes at a community meeting (requiring good lettering skills), to creating simple sketches on a napkin or a board at a meeting, (requiring basic drawing skills), the planning profession still benefits from those that can “do it by hand”.

These lessons and exercises will add more low tech skills to the repertoire of high tech tools, including the proper use of markers, paper and scales. Most exercises will be started in class, with completion and practice as homework.

0. Cognitive Map
1. Lines, Squares and Circles
2. Lettering
3. Illustrated Block Plan
4. Analytical Diagram
5. Scaled Block Plan
6. Basic Axonometrics
7. Axonometric Buildings

Project #1: Discovering a Neighborhood
Group work – 20%

Mid-Term Test
12%

Project #2: Defining a Neighborhood
Partnered work – 25%

Project #3: Analysis and Re-Design of a Public Open Space
Group work – 20%

Final Quiz
5%

Participation
5%

Readings and References
Articles and websites as provided
Schedule

Week One – Introduction
Our first class will include a preview of the course, a discussion about places we know, and the first lessons about manual graphics. We will begin with an introduction to Kevin Lynch’s Image of the City and his five elements of cognitive mapping, as these provide a basic vocabulary and the fundamental structure for urban design analysis.

HOMEWORK: Ex. 1 & 2, Read Lynch Ch. 6, Articles about UD Definition

Week Two – Introduction to Project #1: Discovering a Neighborhood
The subject of the first two projects will be a local neighborhood, as a basic building block of urban design and planning. The primary objective of the course is to provide students with the basic analytical tools of urban design, but this must be preceded by a thorough inventory of a neighborhood’s characteristics. This is not just an account; it must be completed with an understanding of the analysis it will provide, and the potential design alternatives it could inspire. Therefore, it is important that a planner begin with a complete record of all of the relevant aspects of the area, the components of the built form, and how these impact the people who use these spaces.

Land Use will be the first characteristic to be discussed, along with further instruction about basic illustrative techniques and basic spatial analysis. This will be followed by an introduction to digital tools and software for the inventory and communication of an urban design analysis. Studio work will provide instruction in how to develop, process, produce and/or analyze base maps, land use maps, and other digital info provided by the municipality.

DUE: Ex. 1 & 2
HOMEWORK – Download a base map of the neighborhood
– work with the existing file/information to create own basemap
– preliminary Lynchian analysis of neighborhood for tour
– Ex. 3: Illustrated Block Plan
- Readings: ULI Reinventing America’s Suburban Business Districts, A Citizen’s Guide to LEED for Neighborhood Development, and cnu.org

Week Three – Neighborhood Tour
This week’s class will be a tour of the neighborhood presented by municipal officials. Students should arrive prepared with:
• A base map and multiple pieces of trace to record impressions and notes (a clipboard would be useful),
• A preliminary Lynchian analysis of the neighborhood,
• A notebook or other paper to record notes,
• A camera to record visual notes
• DRESS WARMLY!

This tour is extremely important for all students to attend!

DUE: Ex. 3: Illustrated Block Plan
HOMEWORK – Ex. 4: Analytical Diagram – by hand on top of the printed basemap – visit the neighborhood again if you have to
READING –Life and Death of Great American Cities (selections)

Week Four – Quantitative Elements of Urban Design
Through the analysis of a neighborhood, students will explore the relevance of the elements of size, compactness, center, edge, mix, spaces and places of these units. This week we will begin to discuss these, but focus on how design is measured, including density and floor-area ratio. The in-class exercise will focus on the use of scale and quantitative measures.

**DUE:** Ex. 4: Analytical Diagram
- Base Maps and Land Use Maps (Project 1.1)
- All Reading

**HOMEWORK:** P1.2 (Density) and P1.3 (Building Types)

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**Week Five – Elements of Urban Design: Analyzing a Neighborhood**

Urban design is important at all scales – site, street, district, neighborhood, town, city, metropolis, region. Unfortunately, urban design is usually thought of as an aesthetic applicable to just the smallest of areas; where to put trees to improve a streetscape, or the style of bench or trash bin for a public park. Our discussion will focus on the elements of neighborhood planning, which provide the design structure for this fundamental building block of urban environments. We will then explore the importance of context in the consideration of urban design at all the various scales of settlement.

This class will also provide tips for report layout, supplementing the required graphics with text, photos and illustrations. Studio work will include further instruction and exercises regarding digital graphics.

**DUE:** Density Map (Project 1.2) and Building Type Map (Project 1.3)

**HOMEWORK:** Regional Map (Project 1.4), Text, Layout & Photos for Project #1, Figure Ground Diagram (P1.5), Block Plan (P.6)

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**Week Six – Introduction to Project #2: Analyzing a Neighborhood**

Project #2 builds upon the inventory completed with Project #1, providing the opportunity to consider multiple analytical patterns, especially Lynch’s elements for legibility. This is the critical step toward understanding the design process, and the pieces that will eventually define a design solution. A thorough analysis of the neighborhood will lead to an understanding of its strengths and weaknesses, opportunities and constraints, and finally, its definition.

After introducing Project #2, the focus of this class will be the completion of Project #1, with time spent in the lab reviewing work with peers and instructors. We may also continue the discussion about the basics of urban design, in preparation for Project #2.

**DUE:** Regional Map (Project 1.4), Figure Ground Diagram (Project 1.5) and Block Plan (Project 1.6)

**HOMEWORK:** FINISH PROJECT ONE!

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**Week Seven – Connectivity & Neighborhood Planning**

This class will focus on connectivity as the fundamental aspect of community, especially in urban design. Paths, as Lynch described them, include roads, sidewalks, trails or other links that people travel. They connect people to places and contribute to place legibility. The design of these connections is not just the purview of transportation planners, as such specialization has led to the creation of unsustainable environments.

The connections are also places, as they are the public “living rooms” of a community. This week we will explore the networks within the built environment and the considerations for urban design
as they relate to both vehicles and pedestrians including access barriers, walkability, pedestrian comfort, traffic, and parking.

We will also take time to review for the mid-term, discuss Project #2, and provide an introduction to the next exercise about axonometrics, which will introduce students to three-dimensional graphics.

DUE: PROJECT 1
HOMEWORK: P2.1 Nodes, Clusters & Edges
Reading - Review ITE handouts and powerpoint, Complete Streets powerpoint
Ex. 6: Axonometrics
Study for Mid-Term

Week Eight – Defining a Neighborhood
MID-TERM
CHARRETTE: Defining the Neighborhood by Elements & Principles

DUE: P2.1 Nodes, Clusters & Edges
All Reading
HOMEWORK: P2.2 Potential Centers & Ped-Sheds, P2.3 Connections & Circulation

Week Nine – Fundamentals of Urban Design & The Definition of Public Space
Place-making occurs at the confluence of private and public space, built form and open space, individual and community needs. The design of the built environment should be based on the basic elements as discussed, but the best place-making also takes into consideration such fundamentals as view-sheds, neighborhood rhythms, walkability (link to node ratio), shadow studies, figure ground diagrams, and many others.

DUE: P2.2 Potential Centers & Ped-Sheds, P2.3 Connections & Circulation
HOMEWORK: 3 Alternative Neighborhood Plans, Text (Abstract & Conclusions)
Ex. 6 & 7: Axonometrics

Week Ten – Current Issues & Challenges for Urban Design
Specialization in the fields of planning, architecture and landscape architecture has contributed to serious problems facing our society today. Urban design focuses on the confluence of these different vocations, and has become increasingly important for understanding and resolving economic, social and environmental challenges. We will discuss why planners need to understand design, and why designers need to understand planning. This will include an overview of current issues such as environmental sustainability, economic stability and property values, and obesity and walkability.

DUE: Ex. 6 & 7: Axonometrics
Roughs of 3 Alternative Neighborhood Plans, Text (Abstract & Conclusions)
HOMEWORK: Finals of 3 Alternative Neighborhood Plans

Week Eleven - Introduction to Project #3: Place-making
The third project will build on the first two, providing students with the opportunity to focus on specific design problems in the neighborhood. As a place-making exercise, the subject will be a block or corridor within the neighborhood. This will expand the students’ visual, graphic and spatial literacy, focus on their role as planners in designing the built environment, and emphasize how they contribute, whether intentionally or not.
The focus of this project is to develop an understanding of the importance of public open spaces and the attributes that can make them successful. Zooming in on a “nodal” type of urban environment (e.g. plaza, square, park, street) provides an opportunity to explore urban form vs. building form, spatial definition, place-making principles and urban design fundamentals. This project will provide students with a brief design experience, albeit challenging.

DUE: Finals of 3 Alternative Neighborhood Plans, Roughs of Layout, Text
HOMEWORK: FINISH PROJECT TWO!

**Week Twelve – The Design Process**
The design of the built environment is often intimidating for planners, as if it was a mysterious process that only talented artists can master. While it usually takes years of study and practice to become a great designer, planners should understand the fundamentals of the design process and how they can impact it. This class will provide an introduction to how plans are developed and presented, from goals and objectives to programming, from the study of precedents to development visualization, from initial sketches to final products.

DUE: PROJECT 2
HOMEWORK: GOALS & ISSUES

**Week Thirteen – The Implementation of Urban Design**
Plans are merely a collection of desires and aspirations that form the policy of what one wants to be achieved. This week we will review different types of plans and regulations, including Comprehensive Plans, Master Plans, PUD’s, Zoning, Form Based Codes, and Design and Development Guidelines. We will also discuss programs and strategies used by both public and private sectors (e.g. LEED-ND, governmental initiatives, charrettes, toolboxes), and the objectives that these are striving to achieve through urban design.

DUE: GOALS & ISSUES
HOMEWORK: Program & Draft Plans

**Week Fourteen – Place-making continued**
This week we will wrap up the semester, with a final discussion in preparation for the final quiz. There will also be an opportunity to continue working on Project #3 in class.

DUE: Program & Draft Plans
HOMEWORK: PROJECT #3 (especially Plans & Axo)
Prep Q & A for Guest Panel
Study for Final

**Week Fifteen – Finale**
FINAL QUIZ
DUE: Project #3 for final CRITS

**Presentations**
Project #3 Presentations to Guest Critics
Student Q & A for Invited Panel of Professional Planners
Guest professionals will be invited to discuss the importance of design in urban planning and planning for designers. After short presentations by the guests, students will be encouraged to question and discuss their experiences. Student participation in this wrap-up session will be key.
Week Seven – Introduction to Project #2: Analyzing & Defining a Neighborhood
Project #2 builds upon the inventory completed with Project #1, providing the opportunity to consider multiple analytical patterns, especially Lynch’s elements for legibility. This is the critical step toward understanding the design process, and the pieces that will eventually define a design solution. A thorough analysis of the neighborhood will lead to an understanding of its strengths and weaknesses, opportunities and constraints, and finally, its definition.

Connectivity & Neighborhood Planning
Connectivity is the fundamental aspect of community, especially in urban design. Paths, as Lynch described them, include roads, sidewalks, trails or other links that people travel. They connect people to places and contribute to place legibility. The design of these connections is not just the purview of transportation planners as such specialization has led to the creation of unsustainable environments.

The connections are also places, as they are the public “living rooms” of a community. This week we will explore the networks within the built environment and the considerations for urban design as they relate to both vehicles and pedestrians including access barriers, walkability, pedestrian comfort, traffic, and parking.

We will also take time to review for the mid-term, as well as providing crits for the final drafts of Project #1.

DUE: PROJECT 1 Final Draft
HOMEWORK: Study for Mid-Term
    Review Project #2 Handout
    Reading - Review ITE handouts and powerpoint, Complete Streets powerpoint
    for Week #8 homework

PROJECT #1 DUE at NOON, Friday, March 7, 2014
Please submit Electronic Copies to Compass and Paper Copies to the Urban Planning Office

Week Eight – Fundamentals of Neighborhood Design
As education is a circular process focused on unraveling the layers to deeper understanding, this class will include further discussion and instruction about the elements that will be essential for
Project #2. After the quiz, depending on the time, we hope to use visual references and a class discussion to explore these elements, and provide more SketchUp instruction.

**MID-TERM QUIZ**

HOMEWORK: P2.1 Existing Nodes & Districts, P2.2 Existing and Potential Paths

**Week Nine – Fundamentals of Urban Design & The Definition of Public Space**

Place-making occurs at the confluence of private and public space, built form and open space, individual and community needs. The design of the built environment should be based on the basic elements as discussed, but the best place-making also takes into consideration such fundamentals as view-sheds, neighborhood rhythms, walkability (link to node ratio), shadow studies, figure ground diagrams, and many others.

Three-dimensional drawing has become a lost skill for both planners and architects. Axonometrics are the simplest and most useful, as they can be measured. With a little practice, these will become your “napkin illustrations” and/or useful for quick drawings at public presentations. This class will include instruction for the final 2 exercises.

DUE: P2.1 Existing Nodes & Districts, P2.2 Existing and Potential Paths

HOMEWORK: P2.3 Potential Nodes & Districts, P2.4 Existing & Potential Edges

Ex. 6 & 7: Axonometrics

**Week Ten – Introduction to the Charrette as a Design Tool**

Despite all your research and previous attempts, the analysis to define and delineate the neighborhood is still a challenge. To reinforce the benefits of a collaborative process to maximize creativity, and as an introduction to Project #3, this project will offer a brief yet intensive charrette experience. Zooming in on a “nodal” type of urban environment (e.g. plaza, square, park, street), this in-class group project will provide an opportunity to explore urban form vs. building form, spatial definition, place-making principles and urban design fundamentals. In short, your group gets 2+ hours to produce a creative product!

CHARRETTE: Defining the Neighborhood by Elements & Principles; Identifying Potential Intervention Sites

DUE: P2.3 Potential Nodes & Districts, P2.4 Existing & Potential Edges

Ex. 6: Axonometrics

HOMEWORK: Roughs of 3 Alternative Neighborhood Plans, Text (Abstract & Conclusions)

**Week Eleven - Introduction to Project #3: Place-making**

The third project will build on the first two, providing students with the opportunity to focus on specific design problems in the neighborhood. As a place-making exercise, the subject will be a block or corridor within the neighborhood. This will expand the students’ visual, graphic and spatial literacy, focus on their role as planners in designing the built environment, and emphasize how they contribute, whether intentionally or not.
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Current Issues & Challenges for Urban Design
Specialization in the fields of planning, architecture and landscape architecture has contributed to serious problems facing our society today. Urban design focuses on the confluence of these different vocations, and has become increasingly important for understanding and resolving economic, social and environmental challenges. We will discuss why planners need to understand design, and why designers need to understand planning. This will include an overview of current issues such as environmental sustainability, economic stability and property values, and obesity and walkability.

DUE: 3 Alternative Neighborhood Plans, Text (Abstract & Conclusions)
HOMEWORK: P3: Goals & Issues, Program

PROJECT #2 DUE at NOON, Friday, April 11, 2014
Please submit Electronic Copies to Compass and Paper Copies to the Urban Planning Office

Week Twelve – The Design Process
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DUE: P3: Goals & Issues, Program
HOMEWORK: P3: Draft Plans

Week Thirteen – The Implementation of Urban Design
Plans are merely a collection of desires and aspirations that form the policy of what one wants to be achieved. This week we will review different types of plans and regulations, including Comprehensive Plans, Master Plans, PUD’s, Zoning, Form Based Codes, and Design and Development Guidelines. We will also discuss programs and strategies used by both public and private sectors (e.g. LEED-ND, governmental initiatives, charrettes, toolboxes), and the objectives that these are striving to achieve through urban design.

DUE: P3: Draft Plans
   Ex. 7: Axonometrics
HOMEWORK: Revise P3: Draft Plans

Week Fourteen – Place-making continued
This week we will wrap up the semester, with a final discussion in preparation for the final quiz. There will also be an opportunity to continue working on Project #3 in class.
DUE: P3: Draft Plan Revisions
HOMEWORK: PROJECT #3 Final Drafts
    Prep Q & A for Guest Panel
    Study for Final

Week Fifteen – Finale
FINAL QUIZ
DUE: Project #3 for final CRITS

Presentations
Student Q & A for Invited Panel of Professional Planners:
Guest professionals will be invited to discuss the importance of design in urban planning and
planning for designers. After short presentations by the guests, students will be encouraged to
question and discuss their experiences.
Project #3 Presentations to Guest Critics.
Student participation in this wrap-up session will be key.

PLEASE NOTE: Schedule is subject to change, depending upon progress on project work.