CRP 3851/5851
INTRODUCTION TO PHYSICAL PLANNING
2009 SYLLABUS
AUGUST 21 VERSION

Fall 2009, Location: 208 West Sibley
Time: Tu/Th 1140-12:55
Instructor: Ann Forsyth, 201 West Sibley Hall, forsyth@cornell.edu, 612-254-5438
Office Hours: Ann Forsyth Tuesdays 4-6, Thursdays 4-6. Fridays 2-4
Web Sites: http://courses.cit.cornell.edu/crp5851/ and Blackboard
Note: This syllabus must be read in conjunction with the assignment document.

CONTENTS

I. COURSE AIMS AND OBJECTIVES

OVERALL STRUCTURE

Physical planning involves planning the physical dimensions of the built environment at the site, district, city, and metropolitan scale. It includes such topics as where buildings are constructed, infrastructure is placed, and land uses allocated. This course provides a broad overview of physical planning with an emphasis on the dimension of physical planning known as urban design and on tools for doing physical planning. It is in four sections with each part introducing a range of concepts, tools, and methods in physical planning:

- Part 1 provides an overview of key historical and theoretical movements, as well as of the range of plans developed under the moniker of physical planning.
- Part 2 introduces site and subdivision planning from both the development and plan review perspectives.
- Part 3 focuses on infrastructure systems with particular attention paid to circulation and open space systems.
- Part 4 demonstrates how physical planning approaches are used at the city and regional scale.

COURSE GOALS AND OUTCOMES

The course emphasizes several key dimensions of physical planning processes and outcomes:

- Understanding the tensions between social and ecological aspects of physical planning.
- Appreciating how the physical planning process can reflect and mediate community values, public goals, and private markets.
- Comprehending how visual representations can shape public attention.
- Grasping how very basic characteristics of built and planted elements affect places--physical size, materials, adjacencies, location, etc.

The class also aims to demonstrate what urban planners bring to physical planning process. The detailed design and representation of a specific future form is work typically done by those qualified in landscape architecture, architecture, and engineering. This activity has its own lengthy training process (those wishing to do it are advised to try an urban design studio on landscape architecture). Planners typically use a different toolkit. Students will learn some of these skills:

- Using checklists and other systematic observation and assessment tools to systematically assess places and plans.
- Creating design and planning concepts and analyses conveyed through diagrams and learning how to critique graphical representations of physical planning ideas
- Using annotated photographs and simple computer-generated imagery to convey physical planning options and in design analyses
- Integrating physical planning ideas with other data sources, not only about the physical site (ecology, topography, built context) but also the social, economic, and regulatory landscape including information from community members
- Understanding how to use various implementation strategies from capital improvement programs to educational materials

Students wishing to have more specialized training in various physical planning topics should examine courses in environmental, land use, and transportation planning. For those interested in urban design, Spatial Design and Aesthetics in the fall and Visual Methods in Planning in the spring are worth investigating.

II. LOGISTICS

READINGS AND SUPPLIES

The textbooks for this class are:

- Steiner, Frederick and Kent Butler, eds. 2006. *Planning and Urban Design Standards: Student Edition*. New York: Wiley.
- Larice, Michael and Elizabeth Macdonald eds. 2007. *The Urban Design Reader*. New York: Routledge.

- Nick Wates Associates. Community planning handbook: methods. http://www.communityplanning.net/methods/methods.htm.
- Other readings focus on case studies or practical topics are either available online or will be available as PDFs on blackboard.

The following books are recommended and can be ordered inexpensively from online book sellers.

- Booth, Wayne, Gregory G. Colomb, and Joseph M. Williams. 2003. *The Craft of Research.* Chicago: University of Chicago Press. Recommended.
- Turabian, Kate. 2007. *A Manual for Writers of Research Papers, Theses, and Dissertations*. Chicago: University of Chicago Press. Recommended.

They are available as follows:

- Required texts are available at the Cornell Store **(under CRP 3072/5072)** and on reserve at the Fine Arts Library.
- A Blackboard web site has been set up on which all course related documents, assignments, and notices will be posted. For directions on how to self enroll on the site, please go to http://www.cit.cornell.edu/atc/cst/howto_selfenroll.shtml
- The class also has a public web site:http://courses.cit.cornell.edu/crp5851/

CONTACTING THE INSTRUCTOR

Ann has a sign up sheet for office hours outside room 201 West Sibley. FYI, Ann has about three times as many office hours as is required for faculty and is typically fully booked at other times.

III. COURSE REQUIREMENTS AND GRADING

WHAT STUDENTS NEED TO DO

There are three components to grading and they are explained in far more detail in the assignments handout.

- **Best five of the seven assignments = 50%**: This class has assignments due in class on Thursdays. Omitting the first class and thanksgiving there are 13 Thursdays; the grades from your best eight papers will be tallied to add up to your final grade. We will often discuss the work on Thursdays and you will be given 5 minutes at the end of class to write any reflections on your assignment that you'd like taken into account e.g. further thoughts, realization that you missed something, reiteration of the main point. **Note, these are more fully described in a separate handout and there are typically graduate and undergraduate versions of each assignment—make sure you do the right one!**
    1. Environmental Autobiography (week 3, Thursday)
    2. Fieldwork Measurement/audit (week 5, Thursday)
    3. Site Analysis (week 6, Tuesday—after the classes on this topic)
    4. Site Plan Critique (week 9, Thursday)
    5. Infrastructure Assessment (week 12, Thursday)
    6. Visual Participation Strategy (week 13, Thursday)
    7. Metropolitan Plan Critique (one of Sydney, Atlanta, Nairobi, and Mumbai) (week 15, Thursday)
- **Best five of the seven homework assignments/class exercises = 20%.**
    1. Visualizing one acre and a million square feet
    2. Reading Historical Maps
    3. Calculating Densities
    4. Mini Site Plan Review--Millstein Hall
    5. Locating Infrastructure
    6. Representation—Streetscape Improvements
    7. Implementation grids
- **Physical planning manual/manifesto—10 pages (undergrads) -25 pages (grads) 30%.** This can include material from the assignments and homeworks. The page limit includes illustrations.

There are also weekly readings and you are expected to do them before class. They will help you and we will discuss them.

Short illnesses, family events, etc. should be dealt with using the flexibility of being able to drop paper grades. That is, assume you will be sick some time and don't wait until the end to hand papers in. Late papers will be docked points according to the schedule in the assignments sheet—the first hour is 5%. Those with religious holidays that make it impossible to hand in something need to inform Ann Forsyth in writing at least a week in advance. An illness of a day or two is not an excuse for a late paper. If you do have a significant illness that incapacitates for several days or prevents you from handing in the paper you need to inform **Ann Forsyth** ASAP and provide appropriate documentation from a medical professional.

If papers need to be emailed, e.g. due to a printer meltdown, they must be in on time at the beginning of the class period.

More instructions about grading are in the assignments handout. Please read it.

WHAT ANN PROMISES IN RETURN

In return for sticking to these rules Ann will return work promptly with comments. Ann will also give you opportunities for feedback about the course including a mid-semester evaluation. She will share the results of the evaluation with you.

IV. ACADEMIC INTEGRITY

Each student in this course is expected to abide by the Cornell University Code of Academic Integrity. I welcome students talking with each other about the class content, including the content of the readings, but any work submitted by a student in this course for academic credit will be the student's own work.

V. ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

In compliance with the Cornell University policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances, so arrangements can be made.

VI. TENTATIVE COURSE SCHEDULE

PHYSICAL PLANNING BASICS

WEEK 1, AUGUST 27: INTRODUCTION

Topics:

Readings:

Larice and Macdonald (not expected for week 1, but expected after that):

- Lang "Urban Design as a Discipline and a Profession" pp. 462-478.

WEEK 2, SEPT 1/3: PLANS

Topics:

- Levels of physical planning: site, master, general
- Scales: block, street, district, region
- Systems: land use/development, circulation, infrastructure, environmental
- Maps: Analytical maps—formal/figure ground, historical development, social/cultural, ecological, economic, land use; overlay, conceptual, buffered, other assessment
- Building and site drawings—plan, section, elevation, ortho, axon, one point perspective, two point, birds eye

Due: HW Visualizing one acre and a million square feet

Readings:

Steiner and Butler:

- "Types of Plans" pp. 6-17 (Comprehensive plans, urban design plans, regional plans, neighborhood Plans).
- "Mapping" pp. 320-8 (mapping data overview, aerial photographs and digital orthophoto quadrangles, U.S. geological survey topographic maps, property maps in modern cadasres).
- "Regions" pp. 223-226.
- "Places and Districts" pp. 227-250 (neighborhoods, neighborhood centers, historic districts, waterfronts, arts districts, industrial parks, office parks, main streets)

WEEK 3, SEPT 8/10: HISTORIES

Topics:

- 2000 years of physical planning

Due: Environmental Autobiography

Readings:

Larice and Macdonald:

- (Graduate students only);' Berman, "the Family of Eyes" and "The Mire of the Macadam" pp. 17-27.
- Olmsted, "Public Parks and the Enlargement of Towns" pp. 28-36.
- Sitte, "The Meager and Unimaginative Character of Modern City Plans" and "Artistic Limitations of Modern City Planning" pp. 35-42.
- Mumford, "The Garden City Idea and Modern Planning" pp. 43-53.

WEEK 4, SEPT 15/17: THEORIES

Topics:

- Traditional, modernist, humanist, design with nature
- Total design/planning, comprehensive, piece-by-piece, and infill/plug-in
- Design/planning processes—black box, analysis-synthesis/rational model (including evidence-based), analogical/metaphorical, precedent based, pattern/type based
- People meet place—perception, scale
- People meet implementation—key actors, milieux, rational actors, growth machines, structures

Due: HW: Reading Historical Maps

Readings:

Larice and Macdonald:

- Perry, "The Neighborhood Unit" pp. 54-65.
- LeCorbusier "the Pack-donkey's Way and Man's Way" and "A Contemporary City" pp. 66-76.
- Alexander "The Timeless Way" pp. 93-97.
- Lynch "Dimensions of Performance" pp. 109-114.
- Congress for the New Urbanism "Charter of the New Urbanism" pp. 309-311.
- Krieger, Alex. 2006. Where and How Does Urban Design Happen? *Harvard Design Magazine* 24: 64-71. Available in a Google book under Urban Design by Alex Krieger and William Saunders.

SITE AND SUBDIVISION PLANNING

WEEK 5, SEPT 22/24: I SITE ANALYSIS

Topics:

- Systems: land use/development, circulation, infrastructure, environmental
- Design and aesthetics
- Typical social aspirations of physical planning

Due: HW: Calculating Densities; Fieldwork Measurement/Audit

Readings:

Steiner and Butler:

- "Design Considerations" pp. 262-273 (environmental site analysis, urban analysis, scale and density)
- "Land" pp. 79-84 (Slope, relief, and aspect; soils classification and mechanics; habitat patches, corridors, and matrix)

Larice and Macdonald:

- Whyte "Introduction", "The Life of Plazas," "Sitting Space," and "Sun, Wind, Trees, and Water" pp348-363.
- Lynch "The Image of the Environment" and "The City Image and its Elements" pp. 153-165.

WEEK 6, SEPT29/OCT 1: PROGRAMMING AND DESIGN [ACSP]

Topics:

- Who does site planning? Engineers, landscape architects, architects
- What is planned—the program
- Design approaches

Due: **Site Analysis; Physical Planning Manual Outline**

Readings:

Steiner and Butler:

- "Building Types" pp. 119-137 (sections on residential types through schools)
- "Development Types" pp. 251-261 (mixed-use development, transit-oriented development, conservation development, infill development)
- "Implementation" pp. 364-374 (zoning regulation, subdivisions regulation, planned unit development, innovations in local zoning regulations)

Larice and Macdonald

- Lozarno "Density in Communities…." Pp. 313-325.
- Hester "Neighborhood Space" pp377-386.

WEEK 7, OCT 6/8 SITE PLANNING APPROACHES

Topics:

- Aesthetic, ecological, social, and infrastructure-based approaches
- Site planning tools
- Practical considerations e.g. utilities, regulations

Due: HW: Mini Site Plan Review--Millstein Hall

Readings:

Steiner and Butler:

- "Design Considerations" pp. 274-295 (safety, walkability, LEED, streetscape)
- "Safety" pp. 274-279
- "Visualization" pp. 336- (visualization overview, montage visualization, three-dimensional visualization, visual preference techniques)

WEEK 8, OCT 15 (1 DAY) PLAN REVIEW 1

Topics:

- Reading a plan
- Using checklists to critique plans: regulatory checklists, others (aesthetic, health oriented, environmental, etc)

Readings:

Larice and Macdonald:

- Cullen "Introduction to The Concise Townscape" pp. 167-173.
- Scheer "The Debate on Design Review" pp490-499.

WEEK 9, OCT 20/22 PLAN REVIEW 2

Topics:

- Site plan and subdivision review—review of submissions for development
- Neighborhood, comprehensive, and system plan review—reviews of plans by and for government

Due: Site Plan Critique
Readings: See week 8.

INFRASTRUCTURE

WEEK 10, OCT 27/29: INFRASTRUCTURE SYSTEMS PLANNING: COMMUNICATION, EDUCATION, ENERGY, RECREATION, SOCIAL AND COMMUNITY SERVICES, TRANSPORTATION, WATER, WASTE

Topics:

- More than you wanted to know about different infrastructure systems

Due: HW: Locating Infrastructure; Physical Planning Manual Draft
Readings:
Steiner and Butler:

- "Utilities" pp. 182-193 (waste management, wastewater, stormwater runoff and recharge, water supply, wireless infrastructure overview)

Larice and MacDonald:

- Review Perry from Week 4.
- Frey "Compact, Decentralized or What? The Sustainable City Debate" pp328-343.
- Cervero "Drawing Lessons and Debunking Myths pp. 426-434.

WEEK 11, NOV 3/5: CIRCULATION SYSTEMS: STREETS, STREETSCAPES, ETC

Topics:

- Transportation systems overview
- Circulation as public space
- Planners and others roles

Due: HW: Representation—Streetscape Improvements
Readings:
Steiner and Butler

- "Types of Plans" pp. 18-21 (transportation plans).
- "Transportation" pp. 143-181 (sidewalks, hierarchy of streets and roads, street networks and street connectivity, vehicle turning radii, traffic calming, pedestrian-friendly streets, parking lot design, on street bikeways, multiuser trails, transit systems).
- "Traffic Impact Studies" pp. 317-319.

Larice and MacDonald:

- Jacobs (Jane) section on "The Uses of Sidewalks: Contact" pp. 83-92
- Gehl "Three Types of Outdoor Activities pp 365-370.Jacobs (Alan) "Conclusions: Great Streets and City Planning pp. 388-390.

WEEK 12, NOV 10/12: PARKS AND OPEN SPACE

Topics:

- Parks and open spaces as infrastructure
- Social and ecological goals
- Building vs. development

Due: Infrastructure Assessment
Readings:
Steiner and Butler:

- "Types of Plans" pp 27-31 (parks and open-space plans, critical and sensitive areas plans)
- "Parks and Open Space" pp 194-211 (types of parks, greenways and trails, conservation areas, playgrounds)
- "Parks, Recreation, and Open-Space Needs Assessment" pp. 308-309.

Larice and Macdonald:

- Metro Portland "Green Streets pp 406-424.

PHYSICAL PLANNING PROCESSES

WEEK 13, NOV 17/19:PHYSICAL PLANNING PARTICIPATION

Topics:

- Visual participation tools—workshops with maps, day with camera, visual preference survey, before and after images, interactive model building, walking tours, etc.
- Other participation tools: surveys, wikis, etc

Due: Visual Participation Strategy

Readings:

Steiner and Butler:

- "Role of Participation" by Henry Sanoff, pp. 32-34.

Larice and Macdonald:

- Carmona et al. "The Communication Process pp. 480-489.
- IAP2 Public Participation Toolbox (on Blackboard)
- Nick Wates Associates. Community planning handbook: methods. http://www.communityplanning.net/methods/methods.htm.(Selections)

WEEK 14: NOV 24 (1 DAY): PLAN MAKING AND IMPLEMENTATION

Topics:

- Education through policy to construction
- Politics and finance of implementation

Due: HW: Implementation Grids

Readings:

Larice and Macdonald:

- Review from week 1 Lang "Urban Design as a Discipline and a Profession" pp. 462-478.

WEEK 15: DEC 1/3: PHYSICAL PLANNING AND CHANGE

Topics:

- Larger scale planning—scaling up the small, adding together units, or something different

Due: Metropolitan Plan Critique (one of Sydney, Atlanta, Nairobi, and Mumbai)

Readings:

- Freeman and Warner. 2001. "Vulnerability of Infrastructure to Climate Variability…." http://www.proventionconsortium.org/themes/default/pdfs/vulnerability_infrastructure.pdf

Physical Planning Manual Final Due Dec 8