



Environmental Planning Studio



Intermediate Landscape Architecture 550:331, Fall 2017, 5 Credits

Dr. Wolfram Hoefler; whoefer@sebs.rutgers.edu and David Smith; dave.c.smith@rutgers.edu

Planning is about future. Any action we take today has an impact on our future. Planning is one approach to anticipate a possible future and coordinate today's actions in a way that this future will be good for us. Environmental planning has a focus on those human actions and decisions that will alter our future environment.

Planning and design in the public realm also means that we make decisions which impact the lives of other people. When we design a garden for a private client, we ought to follow the directions the he or she gives us. If that client wants a basketball court in the backyard instead of flowers, we will follow his or her wishes and integrate the court as good as possible in the garden—even if that might be tricky. But what about a public park? How do we decide that a basketball court will be built in a park instead of a rose garden? Does

that decision belong to a local mayor, the DEP, a donor who might give money for new roses, or a local activist group agitating for basketball?

You get the picture. Such simple decisions already require us to identify values and criteria, understand processes of democratic legitimation, and consider what “the people” actually want. This decision making becomes even more difficult when we consider long term environmental effects. For example: Does the basketball court lead to growth of impervious surface which might increase flooding risks for future generations? Will the rose garden require pesticides and herbicides that may cause long term damage to flora, fauna, or water quality? As responsible designers we pay attention to all these questions, however, very quickly all these interconnected decisions and possible consequences

grow into a complex system which may turn out to be overwhelming. Structuring and organizing that complexity is one main aspect of environmental planning. Some of you may think that this is probably not the most attractive thing for a creative landscape architect to spend time with. Well the truth is, understanding environmental planning is of utmost importance for any landscape architect working on a specific site, a neighborhood, or at regional scale. Your sophomore year focused on creative site design, this semester we will “scale it up.”

This studio shall help you to bridge the gap between site design and regional environmental planning. Our project provides the opportunity to consider both sides of the equation.

Goal 1: Students will be able to analyze ecological and other landscape processes in order to substantively inform their design decisions.

Goal 2: Students will be able to craft designs at the regional scale that facilitate or enable desired ecological and social scenarios at multiple scales.

Goal 3: Students will understand and apply policies and planning recommendations that regulate the use and design of the landscape in order to develop more

sustainable and implementable designs.

Goal 4: Students will be able to effectively communicate their designs and design principles.

The class also fulfills the **core requirement** experienced **based learning**: Development of problem solving skills; the ability to interpret data, information, and ideas. Submit of report of the experience is required.

This course is required for all students majoring in Landscape Architecture, it is the 3rd studio in the design studio sequence. For students of Environmental Planning & Design with the Landscape Planning Option this class is a suggested elective.



You are
ready
for a
complex
system!



By now, you have learned all relevant basic knowledge needed for this class. The first year of design studio gave you a handle on the design process and the graphic tools needed for expressing your ideas. The class Fundamentals of Environmental Planning provided a basis for the understanding of planning and zoning and how these tools relate to state and federal regulations. You learned that making informed decisions on complex planning issues requires a thorough analysis of spatial and other information, the relevant GIS tool were taught in Fundamentals of Environmental Geomatics. Because you are so well prepared, we are expecting truly innovative concepts, well thought out solutions and exceptional graphics.



Passaic River Open Space System

The Studio is addressing a real world challenge: Develop open space system along the Passaic River that can help reduce storm water runoff and also clarify polluted water. That open space system shall further create attractive parks and provide safe and easy access to the river.

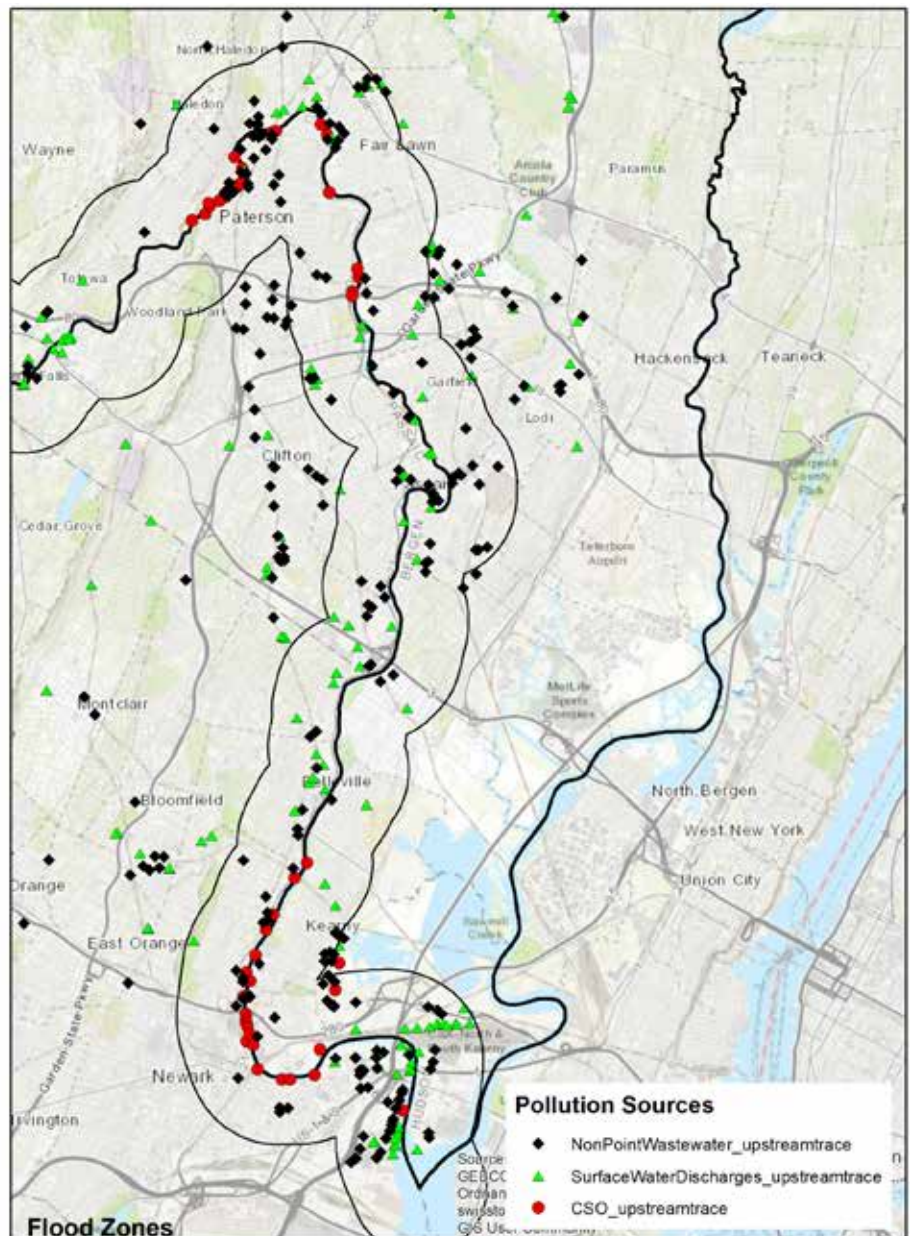


The Passaic River was an important factor for early European settlements and industrial development in northern New Jersey. The river provided necessary drinking water, transportation for people and goods, and energy to power commercial activity. The Great Falls at Paterson, for instance, provided energy for one of the earliest industrial developments in the Nation. However, the Passaic River is also a “victim” of heavy use and pollution. One example is the production of Agent Orange in Newark. The pollution in the lower portion of the river became so severe that it was declared a superfund site. An additional problem are combined sewage outlets (CSO) that spill raw sewage in the river when heavy rain overburdens treatment plants.

Our client is the Passaic Valley Sewerage Commission (PVSC), established in 1902 by an Act of New Jersey State Legislature, began operation of the Newark Bay Treatment Plant in 1924 as a means to alleviate pollution in the Passaic River and its tributaries.

Our concepts will help our client to steer engineering decisions into a more people friendly direction, our maps, diagrams, and design drawings may support future outreach into the community.

Our challenge includes how to handle the extreme complexity of the issues at hand, identify appropriate approaches, and develop beautiful designs.



Assignment 1

Problem & Solution Trees

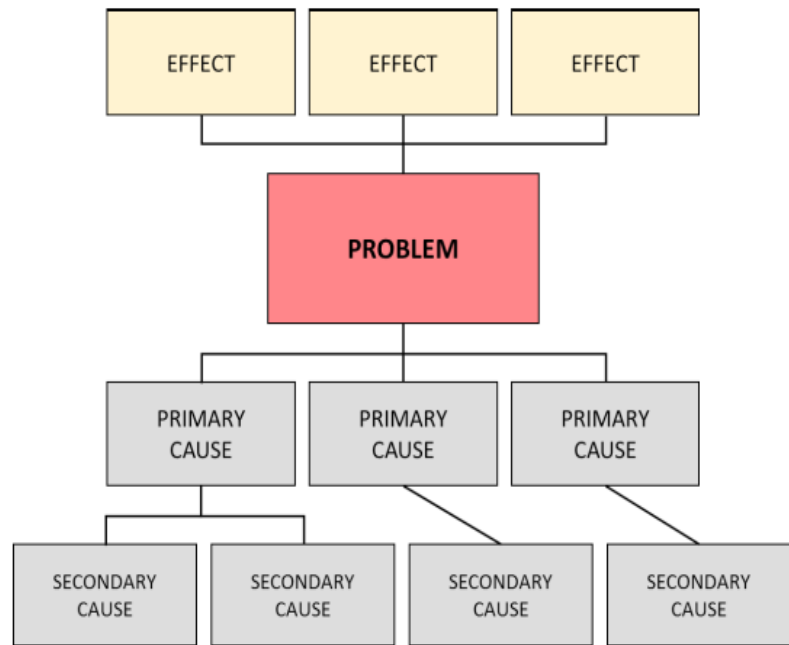
Design Group
 Given 09/5, Due 9/7
 Combined 09/12
 Due 10/24

Deliverables:

- Two flexible diagrams pinned to the wall, using images, sketches, words.
- Identify relationships with strings.

Evaluation Criteria:

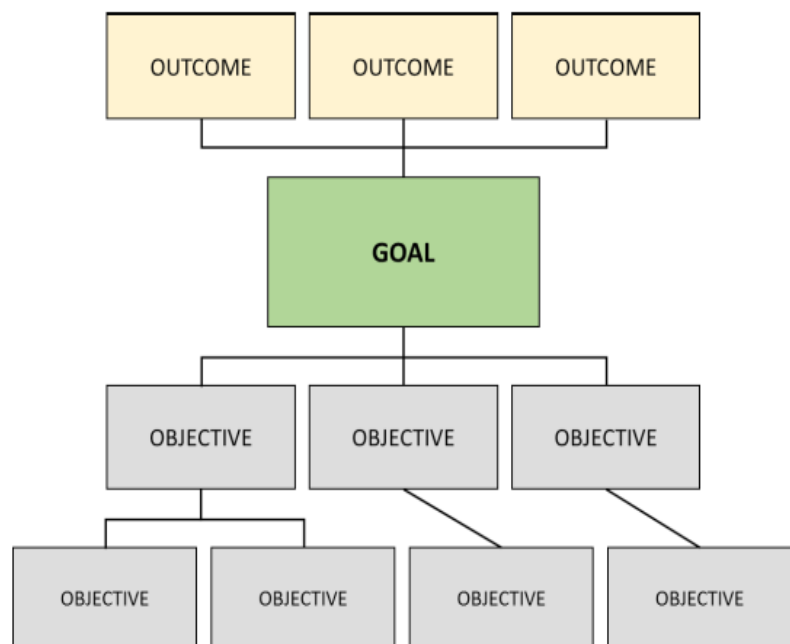
- How clearly the Problem Tree shows how the identified problems are caused by primary and secondary causes, and how those causes interact.
- How well the between problems and apparent effects are illustrated in the collage and the accompanying text.



Example Problem Tree

The problems that we address in planning, especially at the regional scale, are often highly complex. They involve numerous natural, built, socio-economic, and political systems; all interacting with each other in different ways across different scales. If we're going to find meaningful solutions to these problems, we need to apply tools and techniques that help us bring structure to all that complexity. This semester we will be using a tool called "problem tree-solution tree" analysis to do just that. This approach involves deciding on a core problem that we want to address, and identifying the chains of cause and effect that contribute to that problem—along with the larger impacts that core problem may cause—creating a diagram called a problem tree. A solution tree changes the core problem into a goal, and the causes into objectives. This helps us to develop focused interventions that meet naturally related objectives, leading to more effective contributions to the core goal.

The problem tree and the solution tree are not static documents. They will need to be reevaluated, revised, and modified as we learn about the Passaic and its place in the region throughout the semester.



Example Solution Tree

Assignment 2 Data Inventory

Inventory Group

Given 09/14

PDF Due 9/26

Pin up 9/28

Revisions Due 10/5

Deliverables:

- Data collection.
- Data documentation.
- Data dictionaries.
- 24"x36" paper maps.

Evaluation Criteria:

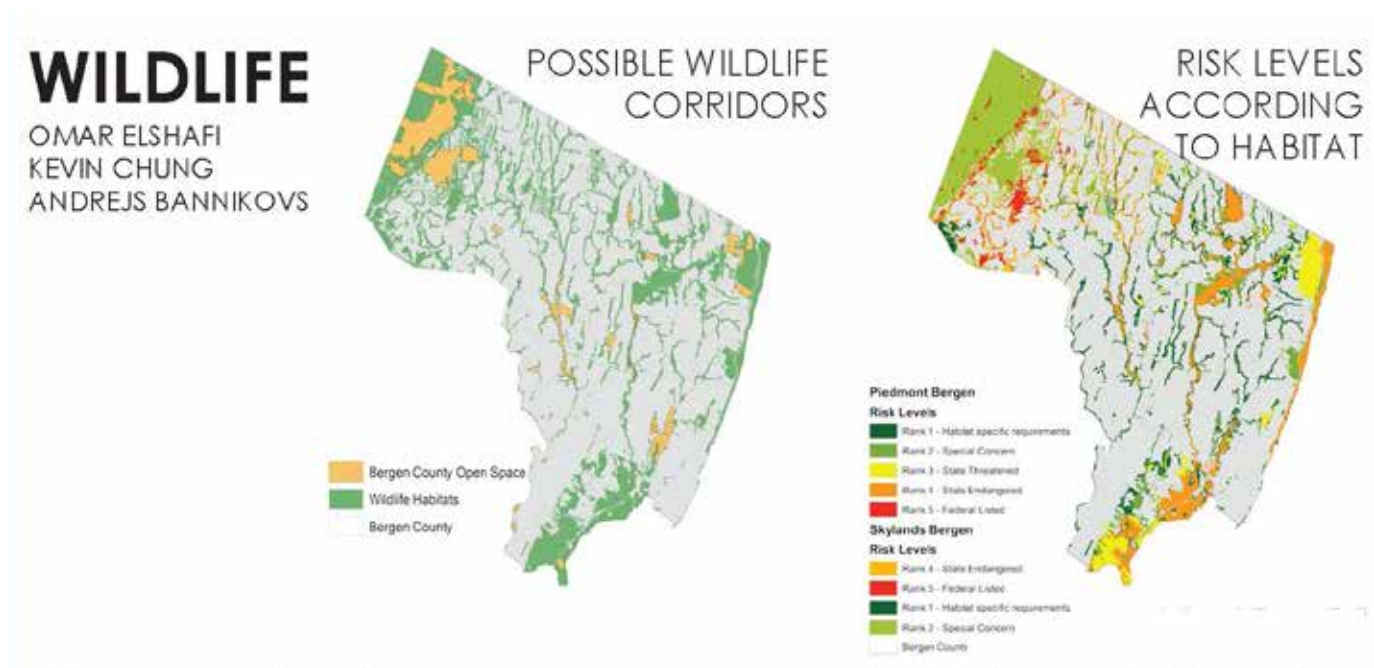
- Relevance of available data collected.
- Completeness of data dictionary (all appropriate fields for all datasets)
- Cohesive selection of data themes for individual maps
- Map design (clarity, effective representation, and aesthetic quality).
- Oral presentation of inventory.

Rational decision making requires correct and accessible information. Decisions based on false or incomplete information are most likely wrong. Of course it is an illusion to think that you may gather all relevant information and that you can ground proof everything. Therefore it is of utmost importance to identify and document the information source and to take into consideration possible limits of factual correctness and completeness.

During a class exercise we will identify a number of natural, cultural, and social systems that are relevant to the development of an open space concept plan, and grouping those into appropriate inventory segments. Each group will select a segment and produce a set of preliminary inventory maps of the systems in that segment. You will identify and collect GIS data from various sources (or produce them where necessary), document the data you have collected in a data dictionary, and produce maps representing those systems as well as interactions among them.

Data collection: you will gather appropriate GIS datasets and place them in a folder with the name of their inventory segment at R:\331_Env_Planning_Studio_2017\ClassData\GIS_DATA\a_inventory\
Data documentation: you will use the data dictionary template in the Resources section of the Sakai site to document the location and basic information about each dataset you have collected (any necessary information should be found in the dataset's metadata).
Data dictionaries should be submitted in the Sakai dropbox for your inventory segment.
Maps: You will design 24"x36" paper maps representing the systems within their segment and interactions among those systems. This may require a single complex map or a number of individual maps, depending on the themes involved. These maps should be printed for presentation. In addition, a PDF of each map should be placed on the R:/ drive at R:\331_Env_Planning_Studio_2017\ClassData\Maps_Inventory

Example senior studio fall 2016
Omar Eshafi, Kevin Chung, Andrejs Bannikovs



Assignment 3 Case studies

Individual
Given 09/13
Due 10/10

Deliverables:

- 5 PowerPoint slides.
- Illustrations and corresponding text.
- Oral presentation and leading of class discussion.

Evaluation Criteria:

- Comprehensive rationale of investigation.
- How well the gathered information is made accessible through text.
- Quality of oral presentation.

For this research assignment individuals have two options.

1) Case studies of open space systems, which may include park masterplans on city, county and state level. They may be located in the US or abroad. What are the goals of these park systems? What makes a parks system good? What is relevant information for developing a successful park system? What is needed to transform a number of individual parks into a cohesive system? What connects Parks? What are core elements of a park system?

2) Research on Green Infrastructure Best Practices. This research gives the opportunity to explore a wide range of best practices concerning storm water management, sewage water treatment, addressing CSOs, green streets, multiple use retention spaces, and so forth.



Possible case study Newark Riverfront Park
Lee Weintraub



Assignment 4 Section Intervention

Design Group
Given 10/13
Pin up 10/24
Due 10/30 at 4:00 pm
Midterm 10/31



Example senior studio fall 2013,
Jessie Woods, Michelle Hartmann, Rebecca Cook

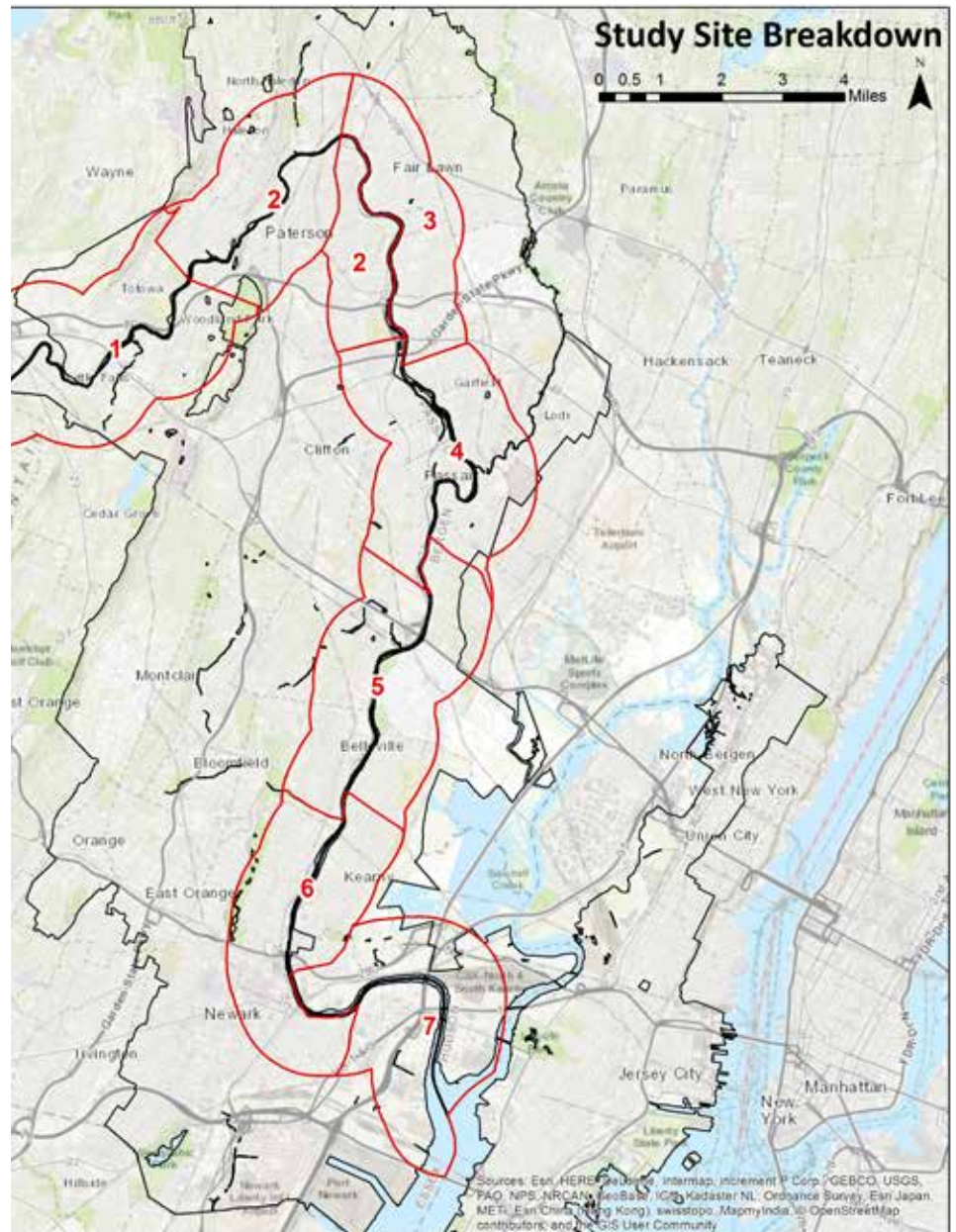
Deliverables:

- One colored print and one digital version that is reproducible (PDF & JPEG file).
- According text.

Evaluation Criteria:

- Green space connection.
- Handling of significant elements.
- Urban context.
- Vehicular/pedestrian Connections/parking.
- Innovation carried through
- Graphics/readability.
- Completeness of information.

The goals and values developed in exercise I will enable you to design an innovative systems intervention. Think outside the box! The sky is the limit for your creativity. In this phase we will also discuss whether your intervention goes well with the work of any of the other design groups or if your system should stand alone. Collaboration and coordination with other groups would be perfectly fine, in fact very welcome. You will assess the performance of the first draft of your intervention using your Statement of Purpose. This impact assessment exercise will allow you to repeatedly test the ideas behind their intervention as you develop them.



Assignment 5

Site Scale Intervention

Individual
Given 10/24
first sketches 10/30
Pin up 11/14

Deliverables:

- One plan at appropriate scale of the interventions.
- Minimum of one additional representation that illustrates the interventions.
- Documentation of iterative process.

Evaluation criteria:

- Relationship to system intervention.
- Visual and verbal presentation.
- Appropriateness to site.

You will use the iterative process of design to explore innovative site scale designs based on your group's section intervention.

The experience and knowledge about the new Passaic River Open Space System you gained so far will inform your site design. Further, this is an opportunity to assess the quality of your overall concept and make improvements based on your site designs.



Design development, design 1, spring 2009, Charles Oropallo



Design development, design 2, spring 2009, Charles Oropallo



Design development, design 3, spring 2009, Charles Oropallo

Assignment 6 Strategies

Design Group
Given 11/3
Due 11/8

Deliverables:

- Strategy outline.
- List and description of supportive groups.
- According text.

Evaluation Criteria:

- Completeness of consideration.
- Quality of descriptive text.

Parks are about people. Without the support of neighbors, local stakeholders, relevant advocacy groups, and administration, the best thought out innovation will fail. This assignments encourages you to identify “your friends” who will provide public support for your intervention. Of course you will also have to acknowledge who may not be in favor of your concept. A solution that is appreciated by everybody is most likely useless because it is just too vague. Further you will explore which existing level of administration could be utilized to support your project and/or which policy should be adjusted. Your task is to identify community support and administrative implementation strategies.

Assignment 7

Merge into Master Plan(s)

Class

Given 11/15

Pin Up 11/28

Due 12/5 at 3:00 pm

Final Presentation 12/18

Deliverables:

- One colored print and one digital version that is reproducible (PDF & JPEG file).
- According text.

Evaluation criteria:

- Green space connection
- Handling of significant elements.
- Urban context,
- Vehicular/pedestrian Connections/parking.
- Innovation carried through
- Graphics/readability.
- Completeness of information.
- Documentation of iterative process.

By now it will have become evident that some of your interventions go well with the work of other design groups. In class we will discuss the possibility to form several “interventions clusters.” Each cluster might describe a set of interventions which are competitive to the solutions of another cluster. You don’t have to agree with some solutions of your classmates, but we have to understand where and why you disagree.



FIG. 4.4

The image above is the “People to Parks” Master Plan Board, presented on Dec. 16th, 2016.

Assignment 8

Documentation

Individual & Groups

Given 09/03

Due 12/12 at 3:00 pm

Final product will be a brochure that documents acquired data, research papers, design process and reproductions of models and drawings. Please follow the Chicago Manual of Style for any written document you produce. Layout details (chapters, headlines, font, graphics, etc.) will be discussed in class. For a professional appearance of the final booklet, consistency is essential.

Deliverables:

- One colored print of the complete brochure.
- A digital version that is reproducible (PDF file).

Evaluation criteria:

- Completeness of Information.
- Sheet layout.
- Graphics/readability.
- Digital organization (all files at appropriate location).



Readings

Nordh, Helena; Hägerhall, Caroline; Hartig, Terry: Urban nature as a resource for public health. In: The Routledge Companion to Landscape Studies, edited by Howard, Peter; Thompson, Ian; Waterton, Emma. Routledge. Milton Park. 296-307

Ollwig, Kenneth 2013: The law of landscape and the landscape of law: the things that matter. In: The Routledge Companion to Landscape Studies, edited by Howard, Peter; Thompson, Ian; Waterton, Emma. Routledge. Milton Park. 253-262

Price, Colin: Researching the economics of landscape. In: The Routledge Companion to Landscape Studies, edited by Howard, Peter; Thompson, Ian; Waterton, Emma. Routledge. Milton Park. 308-321

Qviström, Mattias 2013: Peri-urban landscapes: from disorder to hybridity. In: The Routledge Companion to Landscape Studies, edited by Howard, Peter; Thompson, Ian; Waterton, Emma. Routledge. Milton Park. 427-437

Steiner, F. R. (2008). The living landscape: An ecological approach to landscape planning (2nd ed.). Washington, DC: Island Press.

Waldheim, Charles 2016: Landscape as Urbanism. A general Theory. Chapter Three: Planning, Ecology, and the Emergence of Landscape. Princeton University Press. Princeton and Oxford. Pages 50-68.

It is expected that you research additional literature according to your group and individual approaches!

WWW

<https://www.tpl.org/>
<http://www.pps.org/>
<http://www.nj.gov/pvsc/>



Public arts event at Gret Falls National Park

Events*

Thursday 09/7
Pin up problem tree & solution tree

Tuesday 09/19
Field trip

Tuesday 9/28
Pin up GIS inventory

Tue 10/10 & Thu 10/12
Present case studies

Thursday 10/5
Pin up revised GIS inventory

Tuesday 10/24
Pin up system interventions

Tuesday 10/31
Midterm presentation

Tuesday 11/14
Pin up site designs

Tuesday 11/28
Pin up final Master Plan(s)

Tuesday 12/05 at 3:30 pm
Final boards due

Tuesday 12/12 at 3:00 pm
Booklet due

Monday 12/18, 1:00 pm Final presentation

Lectures*

09/05 Introduction into studio and schedule

09/12 GIS Data Collection, management, and mapping

09/19 no lecture, field trip

09/26 Expert Input

10/03 Expert Input

10/10 Students present Case studies

10/17 Green Systems

10/24 no lecture, pin up

10/31 Midterm Review

11/07 The Promise of Suburbia

11/14 EP administrative levels in New Jersey

11/21 The -isms:

* Date changes may occur due to group process and availability of project partners.

Fine Print

RUTGERS

School of Environmental
and Biological Sciences

Department of Landscape Architecture
Intermediate Landscape Architecture
550:331, Fall 2017, 5 Credits

Lecture

Tuesday 12:35-1:55
Wednesday 3:55-5:15 (common)

Studio

Tuesday 2:15-5:15
Thursday 2:15-5:15

Except for circumstances truly beyond the student's control, all assignments are due at the dates and times specified throughout the semester. Projects that are incomplete on the due date should still be submitted on the date it is due to receive at least partial credit. Any work submitted late will be penalized a grade step for each day past due. Working beyond a due date is both unrealistic in a professional setting and unfair to your classmates in this course.

If you encounter any personal circumstances that inhibit your ability to fulfill the requirements of this course, you should immediately contact the instructor. In addition, any student with a special need, circumstance, or disability, should make an appointment to see me during the first week of classes. Studios provide a very effective but also very intense learning environment and all of us need to feel encouraged to support a studio culture that provides space for every individual to unfold his or her creativity.

Studio sessions, lectures, and the common lectures all count as individual class sessions for this course. More than three unexcused absences will result in a step reduction in your semester grade. Each additional three absences will result in another step reduction. Content missed due to an excused absence will be made available however, any missed quizzes or in-class assignments will not. In addition, an excused absence does not prolong an assigned due date for any assignment.

All equipment must be used appropriately according to the student handbook. Access to the fabrication lab is granted after successfully passing the safety instructions. Access is monitored and can be revoked if students use tools they are not qualified for or if students do not clean after themselves.

If there is a plotting problem, PDF files can be placed on the appropriate folder in the R-Drive and the assignment will not be considered late. However, a printed version is due by the following class period and the late penalty will be assessed thereafter.

It is requested that you will give proper reference to all sources (text and image) quoted in every drawing or text.

Submitted drawings, models, photographs, or written papers for any project assigned in Landscape Architecture courses are considered the property of the Department.

The formatting of all digital submission must follow the department guidelines because they will be retained in its archives for exhibition and accreditation purposes.

All information in this syllabus and course schedule is subject to change throughout the semester and will be announced in the scheduled class periods. It is your responsibility to stay informed!

Grade Rational

# 1 Problem Tree & Decision Tree	10
# 2 Data Inventory	20
# 3 Case Studies	5
# 4 Section intervention	15
#5 Site Scale Intervention	10
# 6 Strategies	10
# 7 Merge into master plan(s)	20
# 8 Documentation	10

Assignment # 1-4 will define whether warning rosters may become necessary.

A – Outstanding – This not only means fulfilling the requirements, but impressing and going beyond the initial expectations of the project. The student has demonstrated a superior grasp of the subject matter coupled with a high degree of creative or logical expression, and strong ability to present these ideas in an organized and analytical manner.

B – Very Good – The student has demonstrated a solid grasp of the material with an ability to organize and examine the material in an organized, critical, and constructive manner. The projects and in class performance reveal a solid understanding of the issues and related theories or literature.

C – Acceptable – The student has shown a moderate ability to grasp concepts and theories for the class, producing work that, while basically adequate, is not in any way exceptional. This performance in class display a basic familiarity with the relevant literature and techniques.

D – Unacceptable – The work demonstrates a minimal understanding of the fundamental nature of the material or the assignment with a performance that does not adequately examine the course material critically or constructively. Students cannot graduate from the Landscape Architecture program with 2 D's in required 550-classes.

F – Failure – The student has demonstrated a lack of understanding or familiarity with course concepts and materials. Their performance has been inadequate. Failure is often the result of limited effort and poor attendance which may indicate that the student is not in the proper field of study.

