INVESTIGATING RESILIENCY ON RECLAIMED LAND
ADVANCED WORKSHOP IN LANDSCAPE + URBANISM

Description:
This workshop explores the relationships between landscape, ecology, and urbanism, and the theories, tactics, and workings of the field of Landscape Urbanism. Rather than solely qualifying it as a practice-based discipline, it conceives of Landscape Urbanism as an intellectual re-alignment of landscape’s role in urbanization processes. A wide array of multi-disciplinary topics is presented through weekly lectures, readings, and guest speakers. Students will conduct group research that identifies future work for the field. Topics will vary from year to year as Landscape Urbanism evolves. This year we question Landscape Urbanism’s ability to deal with issues of resiliency and climate change adaptation. At the front lines of coastal vulnerability are sites built on reclaimed land. The workshop positions these artificially constructed (and imperiled) districts as opportunities for reconsidering urbanism’s relationship with “dry” ground, as well as an opportunity to interrogate hard-engineered infrastructure’s hegemonic authority over coastal defense. It further examines the ability of ecological and landscape frameworks in redirecting flux (and gradients of wet to dry) as physical agents in shaping 21st century urbanism.
Course Objectives:
The first objective of this course is to rethink the relationships between landscape, urbanism, and planning. Working within a myriad of texts from within, and out outside of the discipline, a broader acknowledgment for landscape as a robust medium of urbanization will be presented. We will also be retrospectively analyzing some of the discipline’s most canonical texts (such as the Landscape Urbanism Reader, Large Parks, and Drosscape) in light of their ten-year publication anniversary.

The second objective is to establish the link between coastal urban expansion and the physical terrain it occupies. By associating the act of artificial “land creation” (terra-forming, land-reclamation), larger indeterministic environmental forces at play (erosion, waves, wind, currents..etc..), and city building (provision of infrastructure, buildings, open space.. etc.), we diametrically impart the relationship between landscape and urbanism. Additionally we will assess and evaluate the sustainability, resiliency, durability, and robustness of select projects built on reclaimed land. Will explore sites such the Back Bay Fens in Boston, Flamengo Park in Rio, Battery Park in New York, Spartly Islands in the South China Sea, Yas and Palm Islands in the UAE, Songdo Incheon in South Korea, and the Leslie Street Spit in Toronto.

The third objective is to critique and evaluate contemporary design competitions, discourse, and precedents as they deal with issues of urban coastal resiliency. By exploring a handful of competitions such as Rebuild By Design, Rising Currents, and Waterfront Toronto, we will extract a set of landscape driven frameworks and guidelines that maybe adopted for future transformation of sites built on reclaimed land.

CLASS STRUCTURE
Weekly sessions are structured as follows: 1 to 2 hour lectures introducing contemporary practice, theory and criticism of a weekly topic; about 1 hour (the remaining time) is reserved for discussion and group meetings. Guest lecturers are invited throughout the semester to share expertise on landscape + urbanism topics. Please refer to the ‘Schedule of Topics’ regarding lecture information.

Readings:
The readings are broken into weekly topics covering a wide spectrum of disciplinary thought. The purpose of this categorization is not to become experts in all the given subjects, but to become acquainted with some of the fields most foundational and relevant themes. Weekly topics are not to be viewed in isolation from each other, but rather as a cumulative ‘contaminating’ or ‘cross-pollinating’ of ideas.

Summaries:
Students are responsible for individually reading 25 pages per week of their choosing from the bibliographic materials in the reader. For example, if a selection from the ‘required reading’ list is only 3 pages in length, you must find another reading(s) that is minimally 22 pages long. You are encouraged to read more than 25 pages/week as your schedule permits. Each student must then produce a single page summary / response to those readings.

Each student is required to hand in a printed copy of their summary at the beginning of class. Summaries are to be two pages double spaced (approx 500 words). Please place your name on the summary.

Discussions:
We will discuss ideas from lectures and readings in forum style, with selected students leading the discussion and debate. It is paramount that students come prepared each week with a detailed summary of required readings and a series of questions for group discussions.

Participation is absolutely encouraged and necessary for the success of this course. In the spirit of lively debate and divergent interests, we encourage all students to develop their own polemical stance on the issues covered in the readings. It will not be enough to simply read, comprehend, and regurgitate the words of each author. We expect to hear your viewpoint, agreeable or not, to the author’s thesis or statement.
SCHEDULE OF TOPICS:

Week 1 Feb. 5
Unpacking Landscape + Urbanism
Alan Berger + Fadi Masoud
Introduction + Discussion of research project

Week 2 Feb. 12
Contemporary Resilient Design+ Sites on the Third Condition
Fadi Masoud - Precedent - Site selection w/groups
Modeling + Dynamic Representation Workshop I
Matthew Spremulli
MIT Center for Advanced Urbanism

Week 1 Feb. 19
Islands and Atolls
Luis Callejas
LCLA Office, Harvard University

Modeling + Dynamic Representation Workshop II
Matthew Spremulli
MIT Center for Advanced Urbanism

Week 4 Feb. 26
Landscape as Infrastructure
Landscape as Power
Pierre Bélanger
OPSYS, Harvard University

Week 5 Mar. 4
Systemic Thinking, Ecological Process,
Emergence and Representation
Alan Berger

Week 6 Mar. 11
Group Student Presentations (Part I Due)

Week 7 Mar. 18
Resiliency Districting
Alan Berger + Michael Wilson

Week 8 Mar. 25
No Class, Spring Break

Week 9 Apr. 1
Future of Suburbia Conference
MIT Center for Advanced Urbanism – Media Lab

Week 10 Apr. 8
The Climax End-State Fallacy
Fadi Masoud

Week 11 Apr. 15
Urban Ecology – The Organismal Approach
Peter del Tredici
Arnold Arboretum, Harvard University

Week 12 Apr. 22
Revisiting the Valley Section
The Geologic and Geographic
Fadi Masoud

Week 13 Apr. 29
Ten Years Later - is Landscape Urbanism?
Alan Berger

Week 14 May 6
Final Student Presentations (Part I + II Due)

Week 15 May 13
Final Graphic Reports Due
SEMESTER GROUP PROJECT

This is semester-long visual and analytical research investigation to be presented in lecture and report format. Each group is to select three sites from two different categories*. Each team is to also select three resilient design competition entries to evaluate and study.* No two groups may select the same site, or same competition.

Over the span of the semester, groups will document the development and evolution of each project/district. Using a class-wide pre-set template, teams will illustrate the progression of each site, and trace it back from its current condition (2016) to its original hydrological state (pre-infill) - to be presented in the mid-review. For the second half of the semester, students will forecast, depict, and animate various environmental forces (sea level rise, wave action, currents, erosion, wind...etc.) affecting their chosen sites.

Using the competition precedents, lectures, and reading materials, teams will create a landscape-urbanism based resiliency strategy and a set of projective and informed guidelines/recommendations for the future of their coastal sites. The research must yield various quantitative and qualitative matrices and indices to assess the quality, value, and durability of each project. These indices will assess the cultural, economic, ecological, and structural significances of their sites over time. Teams must aim for a highly articulated piece of criticism to be presented in a report and lecture format.

Previous knowledge of graphic/Modeling software and GIS is highly recommended but not required. We will provide limited workshops and assistance for the completion of the course-work.

*Number of sites depending on class size and number of participants
SITES BUILT ON RECLAIMED LAND:
The process of large-scale land reclamation (creating new land from ocean, riverbeds, or lakebeds by importing rock, sand, cement and gravel) has been a part of urban expansion and transformation ever since the 16th century. At times deemed necessary and systematically linked to the provision of land use, as well as broader hydrological and infrastructural networks, such as the case of Dutch polders. In others land reclamation is a real estate driven and speculative practice that results in outlandish formal developmental schemes. The following is a non-exhaustive list of sites and projects built on reclaimed land. Student teams must select one project from three of the categories to document and analyze for the term project. Student teams may select one site that is not on the list with approval from the instructors. *Highly recommended sites

Claiming Territory
The following projects are / were deemed critical on a national and/or regional scale:
Notre-Dame Island and Expo’67 Site - Montreal
Flevopolder and Beemster - The Netherlands* 
Toronto Islands and Leslie Street Spit - Toronto 
Spartly Islands - South China Sea

Making Real-Estate
The following projects are developer driven and create instantaneous urbanism:
Manama Pearl Waterfront – Bahrain 
Palm Islands and Dubai Waterfront - UAE 
Al Reem Island, Yas, Lulu Islands - Abu Dhabi, UAE 
Songdo - Incheon, South Korea* 
Jurong Island - Singapore

Molding Novel Urban Districts: 
The following projects are acclaimed districts that serve as extensions to historic cores: 
Abandoibarra Etorb – Bilbao, Spain
Aker Brygge and Tjuvholmen – Oslo, Norway
Hammarby Sjostad – Stockholm, Sweden*
Borneo Sporenburg – Amsterdam, The Netherlands

Transforming Brownfields:
The following projects use landscape urbanism as a framework to transform post-industrial infill: 
Toronto Waterfront, Lake Ontario Park, and Lower Donlands – Toronto* 
Darling Harbour and Brangaroo Reserve - Sydney
Battery Park City and Chelsea Piers - New York
Brooklyn Bridge Park and DUMBO - New York

Preserving Historical Junctures: 
The following infill projects enabled significant cultural districts to emerge: 
Back Bay Fens and the Emerald Necklace – Boston*
MIT- Kendall Square and Cambridge Port - Cambridge
Flamengo Park - Rio de Janei ro
Miami Beach or Key West – Florida

From Blue-Collar to Brown Water: 
The following suburban industrial brownfield sites are essential regional economic engines: 
North Greenwich, Silvertown, and North Woolwich - East London, England 
Minamihamacho, Nishinomiyahama and Fukaehamamachi, Osaka - Japan
Port of Rotterdam -The Netherlands
Prescot and Emeryville – Oakland, California
Parco San Giuliano and Triestina Mestre – Venice, Italy*
GRAPHIC TEMPLATE:

A consistent and mandatory graphic template for all drawings and posters will be made available to students. This is meant to streamline the publication post-production process. Adobe Illustrator and InDesign packages will be given to the teams at the start of the semester.

Please see link below for Part I and Part II Templates – as well as attachment https://www.dropbox.com/sh/4ejn2d4oe7uqv28/AADS0-zlAMt_0WQpBzmMapbca?dl=0

Please see link below for Part III – Resilient Precedent Research Poster Template https://www.dropbox.com/sh/0y4oiyf361q2z0z/AADAwurm8btkFdgfnLueKZ7a?dl=0

EVALUATION AND GRADING:

Grades will be based on the following distribution:

- Class participation and attendance: 25%
- Reading summaries: 25%
- Terminal presentation and project: 50%

READINGS:

Week 1 Feb. 5

Unpacking Landscape + Urbanism
Alan Berger
Introduction + Discussion of research project

Please prepare a list of 3 characteristics that you feel differentiates Landscape Urbanism (as described by our authors) from established planning and design fields (Planning, Landscape Architecture, Architecture, Urban Design). We will develop a more comprehensive list using your findings.

CLASS READINGS:


Waldheim, Charles. ‘Design / Agency / Territory: Provisional Notes on Planning and the Emergence of Landscape.” Edited by Neyran Turan. New Geographies 0, no. 0 [2008]: 6-14.”
Week 2 Feb. 12

Contemporary Resilient Design Precedents
Sites on the Third Condition
Fadi Masoud
Precedent / Site selection w/groups
Modeling Workshop + Dynamic Representation I
Matthew Spremulli

Discuss Readings from Week 1

Chapter 7 – 8: green Infrastructure networks pg.128-172

https://books.google.com/books?id=TZX4CgAAQBAJ&pg=PR4&dq=Bradley+Cantrell+and+Justine+Holzman:+Responsive+Landscapes&hl=en&sa=X&ved=0ahUKEwjpy8SU0cXKAhUEhYMKHdCNCKAQ6AEIJTAA#v=onepage&q=Bradley%20Cantrell%20and%20Justine%20Holzman%3A%20Responsive%20Landscapes&f=false

Cowles. “Empower: Visualizing Ecosystem Infrastructure,” Pamphlet


Chapter 15 – Shoreline Processes, Sand Dunes, and Coastal Management: pg 281- 300
Chapter 16 – Sun Angles, Solar Heating, and Environment: pg 303 – 318

“NASA MSFC Earth Science Office, Live Atmospheric Information
http://weather.msfc.nasa.gov/sport/modeling/#
http://weather.msfc.nasa.gov/GOES/"


http://www.fastcodesign.com/3020633/innovation-by-design/perspective-how-i-saved-brooklyn-bridge-park-from-sandys-fury

Week 3 Feb. 19

Islands and Atolls
Luis Callejas
LCLA Office, Harvard University

Modeling Workshop + Dynamic Representation II
Matthew Spremulli + Fadi Masoud


Chapter 7 – flood design analysis: pg 135 -148
Chapter 8 – the coast: pg 150 – 167
Chapter 10- Flood Resistant Design: pg 199-216


Week 4 Feb. 26

Landscape as Infrastructure
Landscape as Power
Pierre Bélanger
OPSYS, Harvard University

• Do you think that the current fascination with “infrastructure” in the planning and design fields is going to make any meaningful and lasting impact? If so, how?
• Can planning and design in the U.S. achieve a “regional” agenda to solve tough environmental problems? What will be the tipping point of change to this scale?
• What are three ways that planners and designers can take lead roles in infrastructure development (instead of engineers)?

Class Readings:


**Week 5 Mar. 4**

**Systemic Thinking, Ecological Process, Emergence and Representation**
Alan Berger + Fadi Masoud

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**Class Readings:**


Week 7 Mar. 18

Resiliency Districting
Alan Berger + Michael Wilson


Week 11 Apr. 15
Urban Ecology – The Organismal Approach
Peter del Tredici
Arnold Arboretum, Harvard University

- What do you think about the “Native Plants” movement?
- How could municipal resources be more effectively spent on managing public landscape and vegetation?
- Should native plants be used when native soils and water regimes are no longer present? Even if this costs more to maintain?
- What is the best way to educate people about disturbed landscapes and the need for new ways for thinking about environmental strategies on them?

Class Readings:
Additional readings will be available 1 week prior to class, provided by the guest lecturer.


Week 12 Apr. 22
Revisiting the Valley Section
The Geologic and Geographic
Fadi Masoud


Week 13 Apr. 29

Ten Years Later - is Landscape Urbanism?
Party of Critics


RESILIENT URBANISM COMPETITIONS:

Each group must select 4 total “resilient” precedent projects from the list below to investigate and study in further detail. You will compose one poster per project (using the provided template) to describe and critique these precedents. Below are dropbox links as well as web links for the projects.

**Rebuild By Design**
General Folder: [https://www.dropbox.com/sh/52ejr31uumxgj7/AACKTVZbE5i6Adi6Atbk1H6zCa?dl=0](https://www.dropbox.com/sh/52ejr31uumxgj7/AACKTVZbE5i6Adi6Atbk1H6zCa?dl=0)

- Resilience + Beach – Sasaki
- Big U – BIG Team:
- New Meadowlands – MIT CAU:
- Resist, Delay, Discharge – OMA:

**Rising Currents**
General Folder: [https://www.dropbox.com/sh/iyuef3w8aucwhil/AADNtq3S6hPfvzNx3hEG99a?dl=0](https://www.dropbox.com/sh/iyuef3w8aucwhil/AADNtq3S6hPfvzNx3hEG99a?dl=0)
Website: [http://www.moma.org/explore/inside_out/category/rising-currents](http://www.moma.org/explore/inside_out/category/rising-currents)

- Zone 0: dlandstudio: Lower Manhattan and the northern edge of the Upper Bay
- Zone 1: LTL Architects: Northwest Palisade Bay/Hudson River
- Zone 2: Matthew Baird Architects: Southwest Palisade Bay
- Zone 3: nARCHITECTS South Palisade Bay
- Zone 4: SCAPE Northeast Palisade Bay/Buttermilk Channel and Gowanus Canal

**Waterfront Toronto**
General Folder: [https://www.dropbox.com/sh/zf1o89louk0zqqi/AAAyU40yRlYV7WYwEDM25-10a?dl=0](https://www.dropbox.com/sh/zf1o89louk0zqqi/AAAyU40yRlYV7WYwEDM25-10a?dl=0)

- Lower Don Lands + Keating Channel + Portland Estuary - Toronto - MWAA
  [http://www.waterfronttoronto.ca/lower_don_lands/clinton_climate_change_initiative](http://www.waterfronttoronto.ca/lower_don_lands/clinton_climate_change_initiative)
  [http://www.waterfronttoronto.ca/explore_projects2/lower_don_lands](http://www.waterfronttoronto.ca/explore_projects2/lower_don_lands)

**Far Roc**
General Folder: [https://www.dropbox.com/sh/en92n8by64o99yp/AABzcga0RxheVRxMVbAY3FT5a?dl=0](https://www.dropbox.com/sh/en92n8by64o99yp/AABzcga0RxheVRxMVbAY3FT5a?dl=0)
Website: [http://www.farroc.com/solutions/](http://www.farroc.com/solutions/)

- Rockaway Rising – Lateral Office:
- Small Means and Great Ends – White + ARUP
- Fostering Resilient Ecological Development F.R.E.D – Ennad
- Far Rockaway – Seeding Office
- New York Suburban Prototype – FRPO