

A6850-1 Urban Design Studio II

The Climate Crisis: Imagining a Green New Deal in the Hudson Valley

Fall 2019, Monday, Thursday: 1:30 PM – 6:30 PM, Friday: 3:00 – 5:00 PM

Faculty: Kaja Kühn (Coordinator), Anna Dietzsch, Jerome Haferd, Liz McEnaney, Justin Moore, Shachi Pandey, Raafi Rivero, David Smiley, Dragana Zoric

Research Associates: Greg LeMaire, Shivani Argawal



ABSTRACT

Working in the Hudson Valley, the Fall Urban Design Studio operates at the regional scale and asks students to enter the discourse of urbanization beyond cities to engage unevenly dispersed socio-spatial ecosystems at multiple scales. The Hudson Valley, a region defined by multiple systems, histories, and geographies, touches the lives of millions and has deep connections to New York City, the global metropolis at its southern edge. For this studio, region is defined neither by a political boundary nor a physical area but, in the tradition of Patrick Geddes¹, the region is understood as the integration of settlements, modes of production and consumption, and the topographic and biological contexts in which they take place.

Specifically, this studio will explore the region's rural/urban socio-spatial ecosystems as the site for intervention to address the global climate crisis. As part of a GSAPP-wide collaboration "[Public Works for a Green New Deal](#)," the studio explores various layers of social and physical infrastructure and will work closely with local stakeholders, elected officials, organizations, non-profits, community groups, and planning and design professionals to envision just and equitable pathways towards decarbonizing the region. The studio will also be embedded in the ongoing work of the [Hudson Valley Initiative](#), an applied research and design initiative at GSAPP.

¹ Daniel Christian Wahl (2017) [Design and Planning for People in Place: Sir Patrick Geddes \(1854–1932\) and the Emergence of Ecological Planning, Ecological Design, and Bioregionalism](#), Medium, 2017



Hudson Valley Initiative, Barge Meet, Kingston, 2017

THE CLIMATE CRISIS

The 2018 report by the Intergovernmental Panel on Climate Change (IPCC) found that limiting global warming to 1.5°C would require **“rapid and far-reaching” transitions in the use of land, energy, industry, buildings, transport, and cities** to make significant reductions in greenhouse gas emissions by 2030 and avert the worst effects of climate disruption. Working across disciplines and scales, the Fall Urban Design studio will examine the **ecological footprint of the region**-- its cities, infrastructure, resources and networks -- in order to propose multi-scalar scenarios for transitioning the Hudson Valley Region to ‘Net Zero’ emissions as the starting point for a sustainable, healthy and just future. As climate stresses and new patterns become more visible and global protests mount, it has also become increasingly visible that the impacts of this crisis are disproportionately experienced by low-income communities and communities of color.

Background: The Green New Deal

As part of a GSAPP-wide collaboration "[Public Works for a Green New Deal](#)," the Studio will address the social, technical, and political contours of the ambitious—but still largely undefined—proposal known as the **Green New Deal**. This initiative is related to the Buell Center's ongoing project, "[Power: Infrastructure in America](#)." GSAPP and the Buell Center will host a number of events throughout the semester and anticipate that work coming out of this

and several other courses will contribute significantly to discussion and actions necessary to address the global crisis.

At the start of 2019, the US House of Representatives passed [Resolution H.R.109](#) calling for a **Green New Deal** to substantially reset climate and social policy of the Country. In June, the New York State legislature passed the **Climate Leadership and Community Protection Act**, a legally binding legislative act to net zero greenhouse gas emissions in New York State by 2050. These efforts complement the global challenge of anthropogenic change, ranging from acts of resistance such as the [#fridaysforfuture](#) school strikes to the startling clarity of IPCC reports, all of which highlight the limited time frame for us to act. They shift our vocabulary from merely acknowledging climate change to embracing the need for systemic action to confront the crisis. Such changes are structural: we need to change the way we live, work, organize, and govern ourselves as a society. Not only do we need to transition to a decarbonized future, however, we must also address the systemic inequalities integral to the globalized urbanization that has brought us to this dire condition.

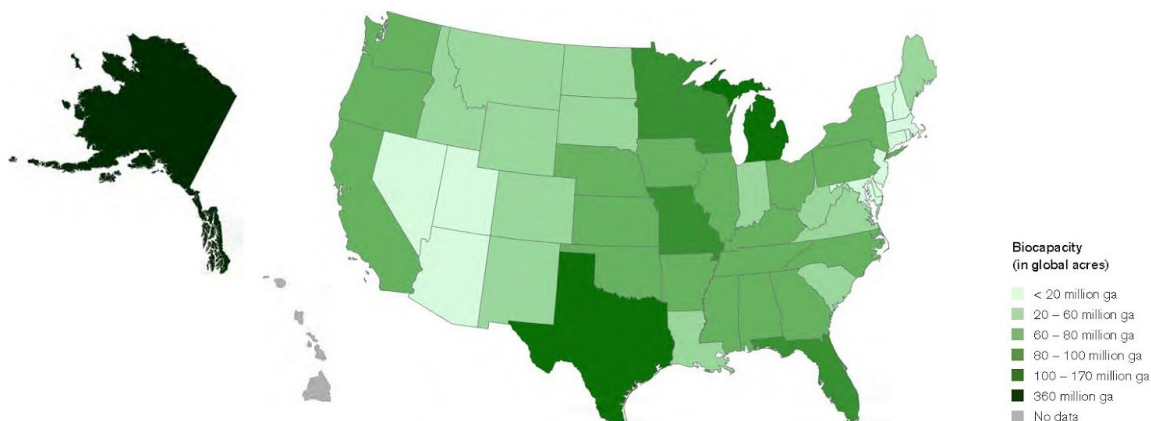
As part of this studio, we will discuss the **socio-ecological footprint** of the region. The *Ecological Footprint* is a concept to measure the demands placed on available natural resources for a given intervention or life style. It asks “How many earths do we need if the world’s population lived like...?” In addition to carbon emissions, the ecological footprint accounts for resource production, consumption and waste -- onsite and offsite --and provides a more holistic outlook on our environmental impact.²

Some initial questions the studio will discuss are:

- **How do we initiate rapid and far-reaching transitions for an entire region by 2030?**
- **What role does government and the idea of “Public Works” play?**
- **What lessons can we learn from the original New Deal?**
- **How does the concept of an ecological footprint apply to a community or a region in a globalized world?**
- **How do we ensure that our interventions to reduce that footprint are equitable and create opportunity for all?**

The richest country?

Almost. The United States is the third-richest country in the world, based on biocapacity,¹ a measure of the biological productivity of its ecosystems. Brazil ranks first and China second. Within the United States, biocapacity varies widely by state.



¹For a complete glossary of terms related to the Ecological Footprint and biocapacity, visit www.footprintnetwork.org/glossary.

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“The State of the States”, a report on the ecological footprint and biocapacity of the 50 states by Global Footprint Network and Earth Economics, 2015

² For more on the concept of the ecological footprint, see <https://www.footprintnetwork.org/our-work/ecological-footprint/>

THE HUDSON VALLEY / REGIONAL SCALE

Narratives of the Hudson River Valley often begin with the histories of pioneering European settlers who started making their marks on the landscape over 400 years ago, supplanting indigenous peoples, or of the American revolutionaries who did the same 175 years later, and of course, of the prosperous Empire State. In the early 19th century waterpower from tributary streams yielded new factories with new residents and dramatically changed life in the Valley. Transportation infrastructures – the Erie Canal in 1812, the Hudson River Railroad in 1849, and the ever-growing network of roads and bridges brought industry and economic prosperity to the region. Each of the region’s resources is in some way marked by its proximity and accessibility - or lack thereof - to New York City, a global metropolis.



The prosperity of the region, its small cities and villages, however, was and remains precarious. After decades of industrial growth in the Valley, early and mid-20th century changes to transport, industry, and demographics have decimated Main Streets and farming districts. Cities such as Newburgh, Kingston, and Poughkeepsie slowly shed population, jobs, investment, and the social networks necessary for community well-being. Mid-century responses to change were often equally destructive, when struggling neighborhoods –typically

low-income and minority communities – were demolished in the name of “renewal”. At the same time, local farms struggled to compete with factory farms and nationally-scaled agribusiness. Other large corporate employers like IBM closed manufacturing plants and office parks, leaving gigantic scars of asphalt and concrete with little prospect for a second life. While some places have managed to stage “comebacks,” income, employment, education, and real estate data show that disparities continue to increase, both in the Valley, and nationally (EIG Distressed Communities Index, 2016).

These challenges are set against the backdrop of one of the most revered landscapes in the American Northeast. Designated in 1996 as a [National Heritage Area](#), its natural beauty inspired one of America’s great art movements, the Hudson River School. Home to America’s wealthiest families across the 19th and into the 20th century, the Valley’s estates, vistas, lakes and flora were idealized as timeless places of beauty and virtue -- even as emerging industry was already tarnishing that image. The beauty of the Hudson Valley, real and increasingly threatened, also gave birth to environmental activism and the conservation movement, setting precedents for national legislation on protecting the environment from development, pollution and resource extraction.

Central to the studio discussion of the Hudson Valley are the unique relationships and dependencies between individual places and their own regional connections. . The Valley offers lessons for urban design intervention at various scales, interpreting varied perceptions, and challenging the geography of decision-making. We will engage this discussion by beginning with an investigation of regional systems, infrastructure and networks.

DESIGNING THE RURAL

“As they mobilise their capacities to shape this emergent terrain of intervention, designers confront an important ethical choice – to help produce maximally profitable operational landscapes for capital accumulation; or alternatively, to explore new ways of appropriating and reorganising the non-city geographies of urbanisation for collective uses and for the common good.”

Neil Brenner, The Hinterland Urbanized

For several decades, architects and planners have focused primarily on the growth of cities and the threshold of more than 50% of the world’s population becoming city dwellers. . Rural spaces, on the other hand, are often associated with economic decline, stagnation and political isolation. In this studio we will bring into focus the territories and places where the other 50% live: small towns, villages, rural landscapes and farmland. We will discuss the relationship between country and city - not as in opposition, of “rural” and “urban” but as a relationship between people and nature, between settlement and landscape, and society and its resources.

With the steady advance of urbanization, the antithetical distinctions between city and countryside, center and periphery, culture and nature have increasingly dissolved. Simultaneously, romanticizing rural space as a site of the natural and authentic, as a victim of industrialization and urbanization, is coming into question. Rural regions – small towns, villages, landscapes, farms, hinterlands – can no longer be understood as places "left behind" by cities but instead are sites of production, inhabitation, knowledge as well as conflict. As designers, we play a critical role in envisioning the future of these territories.

- What are the tools and practices we can utilize in this context?
- In what way are they different or similar to working in an urban context?
- How do urban designers contribute their capacity in places where scepticism towards the discipline and towards change in general persist?



Grace Farms, Connecticut, Image Dean Kaufmann

STRUCTURE

I. NARRATIVES OF THE HUDSON VALLEY

WEEK 1

In this first assignment, you will work in pairs to create a narrative of the Hudson River Valley using a physical model. Each pair will be assigned a specific area of about two by five miles that cuts through places along the river and the landscape on either side. You are asked to condense and communicate physical and non-physical information such as land use patterns, pollution, power, political jurisdictions, ecologies or historic events to develop a narrative of this specific area and the Valley in general. We will line up the models on campus on 9/9 to recreate the River and its many narratives.

II. REGIONAL SYSTEMS AND NETWORKS

WEEK 2-4

Working in assigned teams, analyze the various systems and networks operating in and shaping the Hudson Valley. As a team, you will analyze the territory through a series of systems and goals -both assigned and selected- which operate and impact the region, ultimately allowing you to map and define the extent and shifting boundaries of the region. You will share the acquired knowledge with your classmates in a presentation on 9/26 and with a variety of stakeholders from the region during a workshop in Kingston on 9/29.

III. ARGUMENTS

WEEK 5-8

Following the site visit, self-selected teams of four will develop specific research into an argument based on the two previous assignments. Consider how knowledge from previous research feeds into your team discussion and helps you establish a position and an attitude about ways to address -- in big and small ways -- the climate crisis in the region. During this phase, you will:

- **Develop your team's argument for design intervention in the region**
- **Create a map of stakeholders relevant to your discussion**
- **Identify potential sites for intervention**

For the midterm review you will synthesize your investigations and on-site experience into a carefully constructed design argument that will set the stage for your design proposal.

IV. DESIGN PROPOSALS

WEEK 9-14

For the remainder of the semester your team will continue to develop and refine your argument in the form of a multiscaled design proposal for site(s) in the Hudson Valley region. You are expected to revisit the region with your team for a more in-depth analysis of your chosen site(s) of intervention and to further engage with residents and stakeholders at this location. As we continue to think in multiple scales, site-specificity will drive design decisions and tactics for your chosen site(s). You will use a range of design and representation techniques to test ideas and iterate on formal and conceptual schemes. Your site-specific design proposals are a key part of our studio's and the urban design profession's effort to show how design can have agency in understanding, challenging, and designing change at the regional scale. You will present your final design at a review together with a video to introduce your project, your argument and your stakeholders.

V. WORKSHOPS AND DEBATES

WEEK 1-11

Every Friday, we will have short studio sessions in which we will discuss lectures, readings, or design tools. Several of these sessions will split the studio in smaller groups and are an opportunity to reflect on your studio work and develop your own attitude towards the studio topic and urban design in general. The format and content of these sessions will vary from week to week (see schedule below). You are expected to come prepared and participate in the discussions. You will find relevant readings or tutorials in the studio drive.

WORKSHOP 1: GIS SATELLITE IMAGERY

Friday, Sep 6

Speaker: Kaz Sakamoto

DEBATE 1: A GREEN NEW DEAL

Friday, Sep 13 (Note: discussion on Monday, Sep 16)

The Architecture Lobby. ["Annotated Green New Deal"](#), June 24, 2019

Aronoff, Kate, ["With a Green New Deal, Here's What the World Could Look Like for the Next Generation"](#) originally written for the *Intercept*," December 05, 2018

Doug Henwood, [What the New Deal Can Teach Us About a Green New Deal](#), An interview with Richard Walker in Jacobin Magazine, March 2019

DEBATE 2: THE HUDSON VALLEY

Friday, Sep 20

Film Screening: "Hudson Rising"

Followed by a studio-wide discussion

WORKSHOP 2: THE CARBON BALANCE

Friday, Oct 4

Speaker: Connor Stedman

Reading: Umair Irfan, [Restoring forests may be one of our most powerful weapons in fighting climate change](#), Vox, July 5, 2019

WORKSHOP 3: GIS DATA ANALYSIS

Friday, Oct 18

Speaker: Kaz Sakamoto

WORKSHOP 4: STORYTELLING

Friday, Nov 1

Speaker: Raafi Rivero

Reading: TBD

DEBATE 3: REGIONAL DESIGN THINKING

Friday, Nov 8

Daniel Christian Wahl (2017) [Design and Planning for People in Place: Sir Patrick Geddes \(1854–1932\) and the Emergence of Ecological Planning, Ecological Design, and Bioregionalism](#), Medium, 2017

Pierre Bélanger (2010) [Regionalisation: Probing the urban landscape of the Great Lakes Region](#), Journal of Landscape Architecture, 5:2, 6-23

DEBATE 4: RURALISM

Friday, Nov 15

Brenner, Neil, [The Hinterland Urbanised?](#) (Architectural Design, 7/2016) ISSN: 0003-8504, Volume 86, Issue 4, p. 118

Sheng-Yuan Huang, Yu-Hsiang Hung, [Fieldoffice Architects In Situ: Reflecting on the Rural-Urban Mix in Yilan, Taiwan](#) in AD / Architectural Design Volume 86, Issue 4 July/August 2016

VI. STORYTELLING

WEEK 1-14

Building on your experience of the summer semester and the *Reading New York Urbanism* class in particular, you will use video footage, images and impressions from the region as well as interviews to construct a narrative that sets the stage for your design intervention. You will have the opportunity to discuss your process and storyboard with faculty throughout the semester. A Storytelling symposium on October 4th will offer insights and experiences by professional journalists and filmmakers, and a workshop will continue to build your skills.

Goals:

- Tell the story of an urban design issue to a general audience, who may not read drawings and diagrams
- Practice storyboarding and linear presentation tools, where you determine the timing
- **Introduce voices and images of sites and places that might not otherwise be in the room**
- Present your project or viewpoint without you in the room



PEDAGOGY AND TOOLS

ENGAGING STAKEHOLDERS

Central to the Urban Design program is the idea of situated practices. The urban professions have, for generations, depended upon expert knowledge and social privilege, often resulting in imposed solutions to poorly understood conditions or local experience. Instead, we insist that Urban Design depends on the multiple and often conflicting voices that make up any social agglomeration, and on our efforts to build varied, lasting partnerships with many actors. This understanding is a responsibility, a skill, and a necessity for the study and practice of urban design.

Throughout the semester, you will encounter people who live in, work in or use the spaces, cities and landscapes we examine in a number of ways. Some are organized in community-based organizations, some are regional advocacy groups, elected officials or simply residents with a long history of lived experience in their environment.

Engagements with local stakeholders offer valuable insights and knowledge into the lived experience of a place and its context. It is our obligation to recognize the value of this kind of expertise and not “take” time and knowledge from these groups but instead offer something in return.



Community Design Fellow Meeting with East Harlem residents, 2018

As you encounter local youth, residents, workers and community-based organizations, remember to:

- Be humble and open to the opinions, expertise and insights into their lives that these stakeholders offer.
- Be encouraged to seek out additional voices throughout the semester to contribute to your understanding of the region and your chosen site of intervention
- Be prepared: Bring visual material such as maps, drawings and models to facilitate your conversation about places. (Be mindful that many community members are not experts in reading drawings and prepare your drawings accordingly.)

NARRATIVE AND ARGUMENT

In urban design, you often discuss your project with a variety of audiences. This semester we want to highlight and practice communicating our projects with two types of audiences: The professional guest critics, who will give us feedback on our design process, even if they may not know the places and people in the Hudson Valley. How do we bring those voices and images of place into rooms of GSAPP? On the other hand, community members, stakeholders or members of the public who live in the region may not be well-versed in reading architectural drawings. How can the linear narrative of a video communicate your project to this audience? How can some types of drawing or media communicate better than others?

THINKING IN SYSTEMS

Systems thinking in urban design requires attention to the interconnectedness of multiple scales, the connections between components of sub-systems, and the relationship of “hard” (built) and “soft” (relational) components in the system. The design of a bus stop and a bus map are inextricably linked to understanding user patterns, timetables, or the larger systems of CO2 emissions, the climate crisis and public health. How do soft (seemingly non-physical) systems and hard systems interact? In this studio we are interested in an expanded understanding of regional infrastructure to explore synergies across different systems and scales.

DESIGNING MULTIPLE SCALES

As urban designers, we frequently visualize ideas for others to build, plant, fund, or write policy. While all of these processes inform our design, it is unique to the practice of urban design to synthesize and visualize an imagined future for the built and natural environment. Site-specificity is as important as the thinking through multiple scales of intervention. We will practice a range of design and representation techniques to test ideas and iterate on formal and conceptual schemes.

A core challenge in developing an urban design project is the concurrent development of a democratic process by which we imagine a project being implemented. Who are the actors with agency in the project? Who would advocate, pay for or benefit from it? What is the timeframe in which it is envisioned and who does what? In this studio we are interested in a creative process in which speculative answers to these questions inform the physical form of the urban design project.

STUDIO LOGISTICS

DIVERSITY AND INCLUSION

[Modified from Columbia University's Non-Discrimination Statement and Policy]:

Our studio is committed to providing a learning, living, and working environment free from unlawful discrimination and harassment and to fostering a nurturing and vibrant community. Especially in an internationally and culturally diverse group like ours, it is important that we acknowledge and celebrate our differences, and always treat each other with respect.

We will also make an effort to respect one another's individuality in our forms of address, which includes learning one another's preferred names and pronouns. If you experience anything in the classroom that undermines these values – or if there is anything we can do to better cultivate inclusivity and respect – please feel free to let the studio coordinator know.

It is the policy of the University not to tolerate unlawful discrimination or harassment in any form and to provide those who feel that they are victims of discrimination with mechanisms for seeking redress. Columbia University prohibits any form of discrimination against any person on the basis of race, color, religion, sex, gender, gender identity, pregnancy, age, national origin, disability, sexual orientation, marital status, status as a victim of domestic violence, citizenship or immigration status, creed, genetic predisposition or carrier status, unemployment status.

ATTENDANCE

Attendance is expected for all studio events. The studio curriculum includes class sessions, lectures, site visits, pin-ups, and reviews. Studio meets Mondays and Thursdays 1:30-6:30 pm, Fridays 3:00-5:00 pm unless otherwise noted in the schedule. You are expected to utilize this time to work with your team on your studio project. If you must be absent, please notify studio coordinators in advance via email.

OFFICE HOURS

To schedule meetings regarding administrative issues, contact the studio coordinator: Kaja Kühl kk730@columbia.edu (+1 917 916 5478 for emergency only)

FACULTY CONTACTS:

Anna Dietzsch amd3218@columbia.edu

Jerome Haferd jwh2168@columbia.edu

Liz McEnaney em2150@columbia.edu

Justin Moore jmg35@columbia.edu

Shachi Pandey sp3717@columbia.edu

Raafi Rivero raafi.rivero@gmail.com

David Smiley ds210@columbia.edu

Dragana Zoric dragana@tentwenty.net

GRADING

Studio grading will follow the Columbia GSAPP policy as outlined here: <https://www.arch.columbia.edu/grades>. Students will be graded based on their individual performance.

CITING WORK AND IDEAS

In producing a professional body of research, you are required to acknowledge and cite sources for all material referenced in your graphic as well as textual work.

STUDIO ARCHIVE

You are responsible for archiving your work for each assignment according to archiving instructions distributed by studio TAs. Make sure to include the final product (PDF of boards, slideshow or movie, etc.) as well as all original editable files included therein (for example the InDesign package). For every archive submission, you are expected to take time between review and due date to correct spelling mistakes or similar errors. Please make sure that no files are corrupt and that they are downsized to the extent possible without losing quality. Archived materials will be due on the studio day following a deliverable due date. For mid- and final review, archive due dates will be shared separately. Grades for the semester will not be submitted until all archive requirements have been completed.

STUDIO SCHEDULE

WEEK 1					
	TH	9/5	AVERY 114	1:30 PM	STUDIO INTRODUCTION
	FR	9/6	STUDIO	3:00 PM	GIS WORKSHOP
WEEK 2					
	MO	9/9	WARE	1:30 PM	REVIEW: HUDSON VALLEY NARRATIVE
	TH	9/12	STUDIO	1:30 PM	DESK CRITS
			WARE	6:30 PM	EVENT: IDEAS AND VISION FOR THE HUDSON VALLEY
	FR	9/13		6:30 AM	CONFERENCE: DESIGNING A GREEN NEW DEAL
WEEK 3					
	MO	9/16	STUDIO	1:30 PM	DEBATE: GREEN NEW DEAL, THEN DESK CRITS
			AVERY 113	6:30 PM	LECTURE: JESSE LECAVALIER
	TH	9/19	STUDIO	1:30 PM	DESK CRITS
	FR	9/20	FAY 209	3:00 PM	FILM SCREENING: HUDSON RISING
WEEK 4					
	MO	9/23	STUDIO	1:30 PM	DESK CRITS
	TH	9/26	STUDIO	1:30 PM	REVIEW: REGIONAL SYSTEMS AND NETWORKS
	FR	9/27	AVERY 113	3:00 PM	EVENT: PUBLIC WORKS FOR A GREEN NEW DEAL
WEEK 5					
	SU	9/29		ALL DAY	SITE VISIT AND WORKSHOP
	MO	9/30		ALL DAY	SITE VISIT
	TH	10/3	STUDIO	1:30 PM	DESK CRITS
	FR	10/4	AVERY 114	1:00 PM	EVENT: NARRATIVE PRACTICE
	FR	10/4	WARE	3:00 PM	WORKSHOP: CARBON FARMING
WEEK 6					
	MO	10/7	STUDIO	1:30 PM	DESK CRITS
	TH	10/10	STUDIO	1:30 PM	DESK CRITS
	FR	10/11	AVERY 113	ALL DAY	CONFERENCE: DIGITAL URBANISM (NO STUDIO)
WEEK 7					
	MO	10/14	STUDIO	1:30 PM	DESK CRITS
	TH	10/17	STUDIO	1:30 PM	DESK CRITS
	FR	10/18	STUDIO	3:00 PM	WORKSHOP: DATA ANALYSIS

WEEK 8					
	MO	10/21	STUDIO	1:30 PM	DESK CRITS / STORYBOARD
	TH	10/24	STUDIO	1:30 PM	PIN-UP: MIDTERM
	FR	10/25	STUDIO	3:00 PM	DRY-RUN
	SA	10/26	AVERY 113	1:00 PM	MIDTERM REVIEW
WEEK 9					
	MO	10/28	STUDIO	1:30 PM	DESK CRITS
	TH	10/31	STUDIO	1:30 PM	DESK CRITS
	FR	11/1	STUDIO	3:00 PM	WORKSHOP: STORYTELLING
WEEK 10					
	MO	11/4			ELECTION HOLIDAY
	TH	11/7	STUDIO	1:30 PM	DESK CRITS
	FR	11/8	STUDIO	3:00 PM	DEBATE: REGIONAL DESIGN THINKING
WEEK 11					
	MO	11/11	STUDIO	1:30 PM	DESK CRITS
	TH	11/14	STUDIO	1:30 PM	DESK CRITS
	FR	11/15	STUDIO	1:00 PM	EVENT: RURALISM DIALOGUE
				3:00 PM	DEBATE: RURALISM
WEEK 12					
	MO	11/18	STUDIO	1:30 PM	DESK CRITS
	TH	11/21	STUDIO	1:30 PM	DESK CRITS
	FR	11/22	STUDIO	1:00 PM	EVENT: GREEN NEW DEAL "SUPERCRIT"
WEEK 13					
	MO	11/25	STUDIO	1:30 PM	PIN-UP
	TH	11/28			THANKSGIVING HOLIDAY
	FR	11/29			THANKSGIVING HOLIDAY
WEEK 14					
	MO	12/2	STUDIO	1:30 PM	DESK CRITS
	TH	12/5	STUDIO	1:30 PM	PIN-UP
	FR	12/6	STUDIO	1:00 PM	DRY-RUN
	SA	12/7	AVERY 113	1:00 PM	FINAL REVIEW + SYMPOSIUM

BIBLIOGRAPHY

Hudson Valley

www.hudsonvalleyatlas.org is a collection of literature, resources, news sites, and data for/about the Hudson Valley.

The Green New Deal

For a collection of essays and articles about the *Green New Deal*, visit the [Buell Center's Website](#) for the project.

Ruralism

Joshua Bolchover, John Lin, Christiane Lange, "[Designing the Rural: A Global Countryside in Flux](#)", *AD / Architectural Design* Volume 86, Issue 4 July/August 2016

Vanessa Miriam Carlow, ed., *Ruralism, The Future of Villages and Small Towns in an Urbanizing World* (Jovis, 2016)

Jean Hardy (12/2018): [How Rural America Is Saving Itself](#): *The New York Times* is the latest outlet to ask "can rural America be saved?" They're asking the wrong question.

Bryce Oates, [Measuring Rurality. And Using Data to Inform Better Rural Policy](#). in Medium, March, 2019

Infrastructure

Brian Larkin, [The Politics and Poetics of Infrastructure](#), (Annual review of anthropology, ISSN: 0084-6570 01/01/2013), Volume: 42, p. 327

Pierre Bélanger, *Landscape as Infrastructure: A Base Primer*, Routledge; 1 edition (December 7, 2016)

Reed, Chris and Lister, Nina-Marie: *Projective Ecologies*, Actar Publishers, 2014

Climate Crisis

Paul Hawken, *Drawdown, The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*, Penguin Books, April 18, 2017, See also: [Project Drawdown](#)

David Wallace-Wells, *The Uninhabitable Earth: Life After Warming*, Tim Duggan Books; 1st Edition February 19, 2019

[Carbon Brief](#) is a UK-based website covering climate policy, science and energy policy.

PODCASTS

[Social Design Insights](#) “is a podcast of conversations with leading designers who discuss innovative projects and practices **that use design to address pressing social justice issues.**”

[Green Dreamer](#) “is a podcast and multimedia journal **for those who are yearning to live lives of vitality and fulfillment and who are dreaming of a thriving planet to call home.**”

[The Energy Gang](#), A weekly digest on energy, cleantech and the environment.

[Columbia Energy Exchange](#) “features in-depth conversations with the world’s top energy and climate leaders from government, business, academia and civil society”

[99% Invisible](#) is about all the thought that goes into **things we don’t notice.**

Ecologist Connor Stedman talks about carbon farming in this episode of [Peak Prosperity](#).