

**ADVANCED
SYNTHESIS
OPTION
STUDIOS**

So/

F17-S19

INTRODUCTION

This is the catalogue of Advanced Synthesis Option Studios F17-S19. We are announcing the next four studios to give a future focus in the BArch program for 4th and 5th year students. In these advanced and specialized studios there are opportunities for BArch students to work alongside students in the MAAD, MUD and MArch programs.

STUDIO SELECTION PROCESS

The faculty will determine the studio allocations before the beginning of each semester, (in August for the Fall and in November for the Spring semesters). Students are invited to consider the upcoming studios and express their preferences for the immediate semester in the light of their short, medium and longterm interests and ambitions.

SUBMIT

We would like to receive a discursive response to the options available, with preferences expressed for at least three S18 studios with a minimum 100 words for each, describing what you would contribute to and gain from working in that studio.

In addition, we ask that you set out the longer term trajectory that could be the outcome of taking any of these three preferred studios. Thus you will put the immediate set of objectives for S18 into a larger context.

Please could you return your written response to me by 6pm on Saturday 4th November 2017. Students who are studying abroad for the S18 semester need not submit their preferences.

There will be an invitation for another submission of preferences in August'18 for the F18 studio allocation process.

The S18 studio allocations will be announced on November 7th.

Mary-Lou Arscott AADip RIBA
Associate Studio Professor + Associate Head

cover images

FRONT detail Sketchbook, 2013 Power Boothe

BACK detail, Forwarding 1998 Power Boothe,



Carnegie Mellon University, School of Architecture 24th October 2017

ASO studios listed

F17

Arcott	Thesis_Independent Projects
Colvard	Workspace_Industrial Architecture 4.0
Ficca	Proto-Type_Prototyping the Process
Folan	UDBS_Deconstructing Blight
Gruber	CommoningThe City_Urban Col lab I
Hayes	Architecture of Movement_ La Guardia Airport Terminal Redevelopment.
Kline	Housing Archipelago_New York Speculations on Density
Mondor	Infrastructure Studio_Forces Underlying Urban Form

S18

Arcott	Moving Image_Accelerated Practice, Architecture and Film
Bard	Low Relief_The Virtual and Material Cultures of Architectural Decept.
Damiani	Palladio Institute and Archive_Vicenza, Italy
Folan	UDBS_Reconstructing Authenticity
Gruber	Acupuncture Urbanism_Urban Collaboratory Studio
Hayes	Frozen Music_New Theatre for Sibiu International Theatre Festival
Kline	CommoningThe City_Urban Col lab II
Mondor	Thesis & Independent Projects

F18

Arcott	Thesis_Independent Projects_BArch
Ficca	TBD
Folan	UDBS_
Gruber	CommoningThe City_Urban Col Lab I
Hayes	Architecture for Complexity and Scale
Kline	Creating a City Within a City
Kalla prof	TBD
Mondor	Infrastructure_TBD
Rehman	Thesis_MArch

S19

Arcott	Thesis_Independent Projects_BArch
Bard	TBD
Damiani	High Rise Construction_New Office tower for Pittsburgh
Folan	UDBS_
Gruber	Acupuncture Urbanism_Urban Collaboratory Studio
Hayes	4-D Architecture_Dynamic Design for Dynamic Use,WTC Performing Arts Center
Kalla prof	TBD
Kline	CommoningThe City_Urban Col lab II
Rehman	Thesis_MArch

THESIS

and Independent Projects

The definition of 'thesis' within the context of a professional program in architecture depends a lot on who you talk to in a diverse and often-contentious field of views that spans institutions, individuals, generations, and schools of thought and practice. Tied to the question of 'what is a thesis' are of course varying opinions on what constitutes research in architecture—and whether we do research to frame a project, its argument, and methods, or if in conducting a design investigation we are in fact doing research.

In either case, if we agree that research is being done, then we can also say that in crafting a thesis project, you are entering a wider conversation and exploring problems that have puzzled and inspired others. By proposing your own set of critical questions and methods of inquiry, you recognize your responsibility to engage seriously and rigorously with prior work, and to extend its intellectual scope through your own contribution. This studio adopts this view.

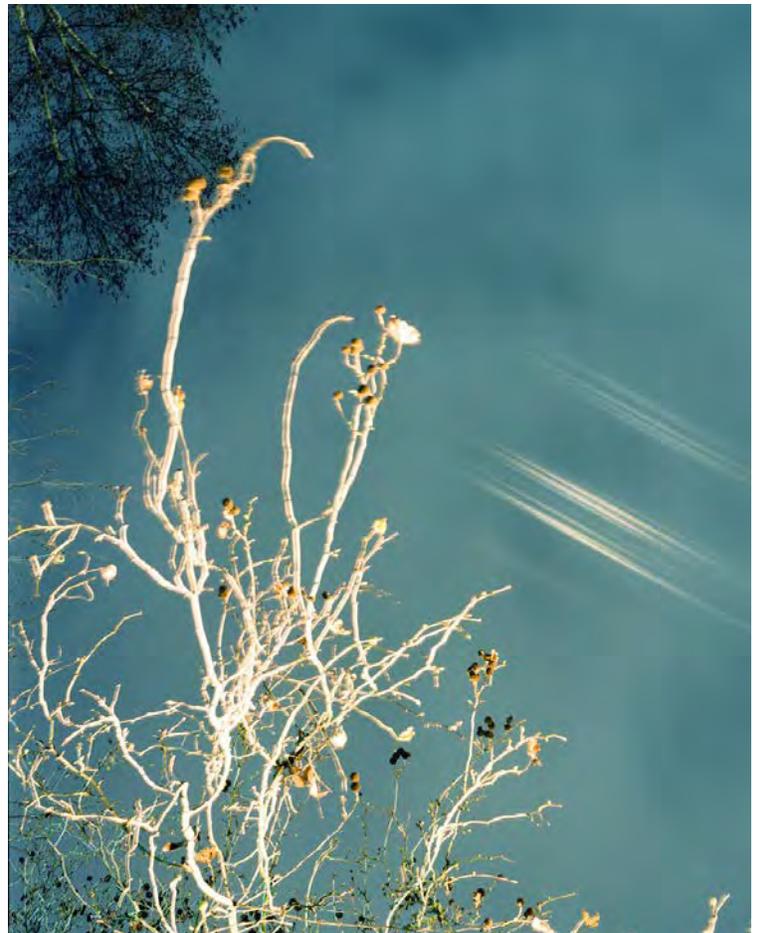
The aim of this studio is to guide you to through the process of clearly defining and structuring a thesis project. The Spring semester for Thesis students will follow the successful completion of the thesis development in the Fall semester. The studio is a venue for constructive discussion and mutual critique. In addition to the core thesis students the studio will include a limited number of independent project proposals for a semester long studio project.

A DVISORS Each Thesis project will required to find two signed-up Advisors, one from within the SoA faculty and another advisor from any other sphere.

Each IP project will need at least one advisor from within the SoA faculty.

Your advisors should be encouraged to attend the scheduled reviews. As the project develops you might need to reassess the relevance of your advisor or include new advisors, so be considerate of their time and make clear the transition if you want to make changes to your team. These are very valuable contacts and you should use peoples' willingness to work with you with respect.

Diana Matar,
April 30th 2012 Rome,
from book
Evidence, 2014



F17/S18



48-405|505

F17 Arscott-S18 Mondor

1.30-4.20 MWF

THESIS

and Independent Projects

As thesis and independent project students we expect you to engage in the application of these learning objectives to the subject, method and means of your own project.

CRITICAL INQUIRY

You will demonstrate creative synthesis, organisational logic and an understanding of an effective relationship between concept and proposition. Through fluid reasoning you will use this capacity to devise questions and interrogate problems in novel situations.

RESEARCH + CONTEXT

You will apply research and planning methods to a design project and utilize critical and contextual research to place your proposition in terms of historical and contemporary theoretical cultural issues.

COMMUNICATION

You will communicate effectively through visual, verbal and written form.

ORGANISATION

You will demonstrate motivation by employing organisational skills to work productively both individually and collaboratively.

While a project is not expected to be a 'building,' it should rigorously address spatial concerns including how space informs and intersects with other processes (social, ecological, historic, etc.). The scale of consideration can range from bodies to territories.

In this studio students are expected to engage and develop a wide range of interrelated capacities, including critical thinking, analytical writing and reflective design production.

Participation 10%

You are required to attend studio hours 1.30-4.20 MWF. The days are organised with Reviews and general discussion on Mondays. Wednesday and Friday will be set aside for work in studio and individual meetings. The times are set out as a regular schedule but can be changed by swapping with each other. Please advise me if you are making changes. On Wednesday at noon as scheduled in the Calendar there will be an optional brown bag lunch in studio for anyone who would like to bring conversation to the table. I will bring fruit!

Reviews are related to concentrations and stages in your work flow. These major reviews should be taken seriously as they serve as a milestone for the three sections defined as 'Context + Framing', 'Methods and Propositions', and 'Synthesis'. Visitors and advisors will be invited to discuss and critique the work.

Attendance to the SoA Lecture series is mandatory and your contribution to the school response to the lectures will be to attend the OPEN DISCUSSION sessions @ 4.30pm 9/13, 10/11, 11/8.



*Diana Matar,
Easter 2005 Cairo,
from book
Evidence, 2014*

The three sections which follow do not describe discrete operations but are periods of emphasis. You will continue to consider context and framing throughout your project. The undertaking is to create an argument, devise methods and propositions to explore the questions, develop and refine a project and form reflective conclusions.

F17/S18



48-405|505

F17 Arscott-S18 Mondor

1.30-4.20 MWF

THESIS

and Independent Projects



*Diana Matar,
March 28th 2012, Benghazi
from book Evidence, 2014*

Part 1 CONTEXT+ FRAMING 20% weeks 1-4

This part of the semester will be devoted to refining your main argument (or debateable proposition) and conceptual framework. You will build an understanding of the critical issues and existing contexts within which your project is situated as well as a thorough analysis of the relevant literature that helps frame the problem, as well as texts and case studies that suggest new openings and directions for investigation.

You will be expected to demonstrate the evolving understanding through a series of preliminary design speculations. This work does not stop as we focus on the next section.

Your calendar of operations for this semester should be created in week 2 and become a working tool to be adjusted as you proceed.

Part 2 METHODS + PROPOSITIONS 30% weeks 5-10

In this part of the semester you will outline the methods of design inquiry and investigation best suited to your project. You will apply these methods in an iterative process to test the design speculations you put forth in the first part. By the end of this part you should have revised your abstract, references, method statement and developed a draft calendar for thesis completion in the Spring semester.

Part 3 SYNTHESIS + PRESENTATION 40% weeks 11-16

The final part of the semester will be devoted to refining your project and its arguments, based on the comments and critiques from prior weeks. In addition you will be expected to develop your work into a summary document which will act as either a conclusive stage in your project (if you are an IP student) or as a summary of work to date and of projected development. The format for these documents should be established and agreed during October.

F17/S18



48-405|505
F17 Arscott-S18 Mondor
1.30-4.20 MWF

WORKSPACE

Industrial Architecture 4.0

The factory has a special hold on the public imagination. Perhaps alone beside the skyscraper, it is the rare construction of a scale to rival the grandeur of the American landscape. Cloaking vast expanses of dynamism and productivity within simple compositions and cool facades, the factory has been a catalyst for urbanization, a wellspring of both prosperity and civil disorder, and a source of dire environmental consequences. As Elsie Driggs wrote of the Jones & Laughlin Mills, the subject of "Pittsburgh" (1928), her breakthrough work – "This shouldn't be beautiful. But it is."

While fewer Americans work in factories today than at any point since the 1940s, manufacturing remains at the forefront of political conversation, with 20th-century industrial relics serving as stage sets for protectionist posturing and urban renewal crusading alike. Lost among this noise is the heartbeat of the factory typology itself.

Following an arc from Ledoux's 18th-century royal saltworks at Arc-et-Senans through Dean Clough's Halifax mills of the 1840s-60s, Behrens's AEG turbine factory at the turn of 20th century and Albert Kahn's River Rouge Complex designed for Ford less than two decades later, architects have made compelling, sometimes polemical work from the seemingly constrained programmatic requirements of industry. Even among the



TOP
Elsie Driggs,
Pittsburgh 1927
painting

LEFT
Industrial Facades
photographers
Bernd+Hilla Becher
1966-1999

BELOW
Chemical Factory, Poland
architect Hans Poelzig
1910

more anonymous works documented by Driggs, Ralston Crawford, and Charles Sheeler, and later by Bernd and Hilla Becher, industrial architecture has offered rich opportunities for artistic and tectonic expression.

The scale, structure, and spatial logic of the factory have continued to evolve at pace with changing technologies and labor conditions throughout this history. Now, amid shifting workforce demographics and accelerating environmental change, and on the cusp of a new generation of advanced manufacturing techniques – as the Germans put it, of Industrie 4.0 – how can this tradition speak in response?



F17



48-400/500 Studio
Instructor: Daniel Colvard
W/F +12:30-4:20

WORKSPACE



LEFT
Ed Burtynsky
Manufactured Landscapes
2005

RIGHT
ABB Collaborative
Robotics, "YuMi"
IRB 14000

This semester we will explore the future of work and the implications of technological change in manufacturing on built form and placemaking. We will begin by immersing ourselves in the language of industrial architecture through close study of industrial precedents and modes of graphic representation associated with this architectural tradition. We will then investigate the human and spatial consequences of new industrial techniques including collaborative robotics, additive manufacturing, and continuous manufacturing. In addition to taking advantage of resources and expertise unique to Carnegie Mellon, we will tour industrial facilities throughout the region and receive hands-on training in the operations and support of new industrial technologies.

Through a series of workshops with industry and academic collaborators, we will weave together these threads of research to define a building program and evaluate sites, then students will move forward to develop proposals for new advanced manufacturing facilities with this foundation in place. Final proposals will reflect student research and design, reinterpreting the factory typology in

response to new industrial technologies, ecological imperatives, and the expectations of a changing workforce. Students are encouraged to propose new architectures that will speak articulately for this emerging moment, even after its future has passed.

Research will be conducted collaboratively; proposals will be developed in pairs.

STUDIO THEMES

Typology: What is the spatial and tectonic vocabulary of industrial architecture?

What forces have reshaped its grammar over time?

Performance: What are the current frontiers of manufacturing technology? What are the social and spatial consequences of technological change? What are the drivers of environmental performance in future manufacturing workplaces?

Scale: What is the future of manufacturing within dense urban environments? What are the implications of scale on urban placemaking?

Representation: What is the cultural and political significance of industrial architecture? What role does artistic representation play in shaping perception of the future past?

F17



48-400/500 Studio
Instructor: Daniel Colvard
W/F +12:30-4:20

WORKSPACE

Industrial Architecture 4.0

TOP

AEG Factory
architect Peter Behrens
Berlin, 1909

BOTTOM

Ford Motor Plant
River Rouge, Detroit, 1927
photographer
Charles Sheeler

LEARNING OBJECTIVES

Develop and articulate a critical understanding of the relationship of program, form, and structure within a typological history.

Expand communication and investigative skills through interaction with academic, industry, and community leaders.

Apply research in the definition of a building program.

Synthesize complex technical, social, and disciplinary conditions in solving a design problem.

Deploy new analytical tools to test formal and organizational development in an iterative design process.

Derive novel modes of representing the performance, scale, and character of industrial architecture at this unique place and time.

Deepen understanding of the role of applied research in determining function, form, and systems and their impact on human conditions and behavior



F17



48-400/500 Studio
Instructor: Daniel Colvard
W/F +12:30-4:20

PROTO-TYPE

Prototyping the process

This studio, which includes students in the MAAD and BArch programs, will investigate the role of physical artifacts as models, machines, and prototypes within the design process. Particular attention will be placed upon architectural envelopes as spatial, performative, representational and political elements.

The studio will meet in the CFA studios on Mondays and Fridays from 1:30 – 4:20 and in dFAB on Wednesdays from 1:30 – 4:20. These Wednesday meetings will provide opportunities for digital fabrication and material processing workshops and general workshop time to develop models and prototypes.



As an architect you scribe your tales into the sand of the earth and the language of materials. In the beginning you meet materials as a challenge. You try with all your power. You force it. But the significant architects develop a dialog with materials. -Sverre Fehn

*Norwegian Glacier Museum, Fjaerland
1991-2002*

F17

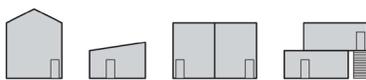


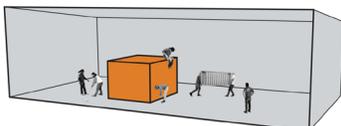
48-400/500 Studio
Jeremy Ficca
MWF + 1:30 - 4:20PM

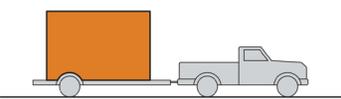
Home Re_Considered

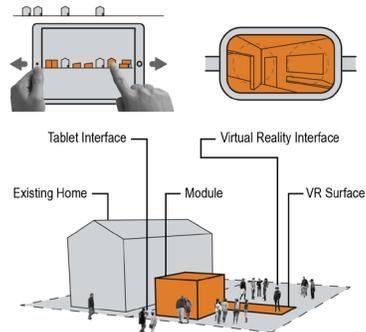
The 2017/2018 Urban Design Build Studio (UDBS) will focus on affordable housing and the development of experiential tools for enhanced resident engagement through Public Interest Design (PID) processes. The aspiration of the year-long studio sequence will be the implementation/ construction of an affordable housing prototype. The design and production of the housing prototype will be influenced by three considerations: 1) necessity/need, 2) social justice, 3) opportunity for proactive, systemic change. At present, availability of affordable housing is failing to meet demand in Pittsburgh, Pennsylvania. Expansive change to the urban landscape perpetuated by recent development activity has

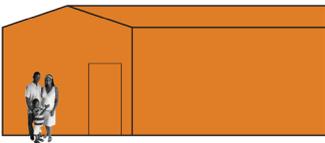
displaced many under-represented populations and exacerbated socio-economically biased trust issues within communities; reinforcing a regional culture marred by segregation and exclusion. Contrary to public perception, displacement is not by design. Policy, funding, and financially unsustainable construction practices influence the behavior of the development community and undermine potential for change. Production models in allied manufacturing disciplines suggest an opportunity to exploit traditional and advanced technologies as a mechanism for impacting positive social change by increasing the affordability of all construction; not just a small sector of the industry tied to financial subsidy.

1  STUDENTS DESIGN HOUSING OPTIONS
in collaboration with East Liberty Development, Inc. (ELDI)

2  DETAIL + BUILD REPRESENTATIVE ROOM
Prefabricated in off-site warehouse by UDBS and PROJECT RE_

3  TRANSPORT ROOM TO NEIGHBORHOODS
Placed on vacant potential housing sites controlled by ELDI or URA

4  COLLECT FEEDBACK FROM LOCAL RESIDENTS
via in-person conversation and interactive activities

5  FEEDBACK YIELDS FIRST BUILT HOME
to be monitored and evaluated before production begins at scale

F17



48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

Home Re_Considered

HOME RE_CONSIDERED will utilize this constellation of considerations and opportunities as a platform to initiate a year-long design-build sequence in the implementation/realization of an affordable housing prototype, RE_CON 01, and demonstrative/experiential design tool, the HOME Inc.UBATOR. Housing options for RE_CON 01 will be designed with input from a non-profit entity, East Liberty Development (ELDI), and Trade Institute of Pittsburgh (TIP) apprentices who are members of the communities where affordable housing will be placed. Extending a collaboration with the IDeATe Reality Computing program, the studio will explore the potential for augmented and adaptive reality computing applications to enhance analysis, pre-fabrication practices, and social/public engagement methodologies. Divided into a sequence of four modules, the UDBS will utilize 1) Data Capture via Lidar Scanning to enhance understanding of physical place, 2) Data Sets to enhance understanding of demographic/socio-economic condition, 3) Virtual Reality applications to enhance understanding of spatial potential, and 4) Physical prototyping to advance work on RE_CON 01. As proposals for housing prototypes are developed and systems explored, they will be tested at full scale utilizing construction facilities at PROJECT RE_. This work will form

the core foundation for the HOME Inc.UBATOR, a portable residential housing module prototype equipped with reality computing and advanced virtual reality visualization technology that aspires to enhance the efficacy of community engagement in the development of affordable housing for all. With a compliment of physical and virtual components/experiences, the incubator will help residents fully understand housing proposals for RE_CON 01. As a physical building module temporarily installed on sites within neighborhoods, residents will be able to tangibly experience spatial qualities, materials, and sustainable building strategies first hand. Interactive VR Goggle and tablet-based interfaces will enable residents to manipulate representations of the interior environments and exterior shell of proposed designs in real time. Feedback collected will develop community ownership of, and foster trust in, the affordable for-sale housing prototype to be produced through PROJECT RE_.

F17



48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

Home Re_Considered

The HOME RE_CONSIDERED studio is a component of a broader Public Interest Design continuum established by the UDBS and PROJECT RE_. This studio provides a pre-text for work in the Spring 2018 UDBS ASOS, HOME RE_DEFINED and anticipated opportunity for subsequent Summer 2018 UDBS Paid Internship. Enrollment in HOME RE_CONSIDERED, Fall 2017, will require a one year commitment from students to fulfill construction/implementation responsibilities. Skill sets and sensibilities developed in each UDBS ASOS and Co-requisite courses are intended to inform subsequent studios and the implementation of work through jurisdictional review processes. Taking a project from initial concept through the completion of construction requires commitment over the entire one year projected timeline. UDBS summer internships are reserved for students who have completed a sequence of two (fall and spring) Urban Design Build Studios, and are offered based on demonstrated ability to accept responsibility. The structure of the UDBS sequence is designed to afford students an opportunity to participate in a one year long sequence in the fulfillment of a Public Interest Design agenda. The focus of each UDBS sequence evolves with issues of regional and global significance.

The studio is open to 4th and 5th year undergraduate students in the BArch program. Undergraduate 4th year BArch students enrolling in the UDBS, and interested in developing an expertise/focus in Public Interest Design may elect to continue to work with the UDBS in the 5th year of the program.

The UDBS is a vertically integrated, interdisciplinary studio. The studio will be composed of students from the Masters of Architecture (MArch), Masters of Architecture Engineering and Construction Management (AECM), Bachelor of Architecture (BArch), Masters of Urban Design (MUD), and IDeATe Reality Computing Programs. The studio will meet Mondays, Wednesdays, and Fridays from 1:30PM to 4:20PM. Students enrolled in the Urban Design Build Studio (UDBS) HOME RE-CONSIDERED Studio are required to enroll in 48_495, SCALING CHANGE (9CU). SCALING CHANGE will meet on Mondays, Wednesdays, and Fridays from 12:30PM to 1:20PM. Portions of each Monday and Wednesday studio session will be utilized for collaboration on Reality Computing strategies related to augmented and adaptive technologies with IDeATe in the Collaborative Making Center, Hunt Library.

This studio is generously funded by Autodesk, the Heinz Endowments, and the Urban Redevelopment Authority of Pittsburgh (URA). All construction work will be done in collaboration with the Trade Institute of Pittsburgh (TIP) and Construction Junction (CJ). Students will work shoulder to shoulder with populations representing the communities where the UDBS practices.

F17



48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

Home Re_Considered

CONTEXT:

The UDBS is a Public Interest Design (PID) entity. Each individual enrolling in this studio recognizes that work is executed in communities, with residents served by the Urban Design Build Studio (UDBS). The UDBS works across the spectrum of scales from urban to ergonomic. With the enormous privilege that this opportunity provides comes responsibility. Work is done for clients with unmet needs, working to budget and schedule demands required to meet their needs. Students are expected to be present for all client meetings and participatory design sessions. The ability to realize a project through construction/implementation is earned, and not an entitlement. While every effort will be made to schedule community/client meetings during class time, client need/schedules will determine times outside of scheduled class. By enrolling in the UDBS, students understand and acknowledge that there are risks in travelling to and from work sites, meeting locations, and other studio related destinations visited regularly throughout the course of the semester. PROJECT RE_ is the primary construction/fabrication space utilized by the UDBS.

Students acknowledge understanding that PROJECT RE_ is an off-campus facility and that students are responsible for their own transportation to and from the facility. UDBS work includes physical labor and requires the utilization of construction tools/equipment that may cause bodily injury. Students acknowledge that they understand the risks associated with using the tools and do so of their own volition. The UDBS collaborates with organizations include individuals with previous legal violations and/or incarceration. The Trade Institute of Pittsburgh (TIP), a partner in PROJECT RE_, focuses its apprentice training on individuals re-entering society post incarceration. Students enrolling in this studio acknowledge that they understand the working conditions and have elected to participate in the studio of individual volition.

F17



48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

COMMONING THE CITY

Urban Col/lab I & II

OVERVIEW

This two semester research-based studio sequence is focused on the bottom-up transformation of cities. The first semester, taught by Stefan Gruber, will focus on group case study research, and individual design project proposal development. The second semester, taught by Jonathan Kline, will support students in developing their individual proposed design projects. The fall studio will include an international research trip. This studio is required for all second year Master of Urban Design students. ASOS Students may take the fall or the fall and spring as a sequence, but not the spring only.

FALL: RESEARCH-BASED DESIGN

For the 2017/18 academic year the Urban Col/lab studio will collaborate with [ARCH+](#), Germany's leading journal for architecture and urbanism, and the [IFA](#), a cultural agency curating programs and exhibitions for Goethe Institutes, German cultural centers across the world. As research partners, we will contribute to an exhibition and accompanying magazine on Urban Commons that will open in the Fall of 2018 in Berlin, before traveling to Pittsburgh, followed by other international destinations. We will travel to Berlin as a studio from October 13-22 for a workshop with ARCH+ and to visit paradigmatic examples of spaces of commoning—citizen-led architecture and urban design projects that have contributed to the bottom-up transformation Berlin since the fall of the Wall. During



Riken Yamamoto's Co-Housing project Local Community Area, Tokyo.

the fall semester the studio will collectively produce an “Atlas of Commoning,” assembling case studies that critically explore practices of urban commoning and embed them in a broader context of societal transitions. Students will research both assigned and self-identified cases, and produce summaries and comparisons in a shared graphic format to be developed collectively for the exhibition and publication.

SPRING: DESIGN-BASED RESEARCH

Building on our collective research, the spring studio will focus on developing individual thesis and design proposals that explore the theme of urban commoning. For the project students will be expected to take a personal position and formulate a thesis, expressed and explored through design. The site, program and general parameters of the project will be determined during the fall, allowing students to gather data and base materials over

*“Berlin is poor
but sexy.”*

*casual comment turned
official slogan by Klaus
Wowerit, former mayor
of Berlin, 2003*

F17/S18



48-400/500 Studio
Instructors: Stefan Gruber (F17) Jonathan Kline (S18)
W/F +12:30-4:20

COMMONING THE CITY

the winter break. The final phase of the of the project will collect and compare the studio's work in a set of final documents utilizing the shared graphic format developed in the fall.

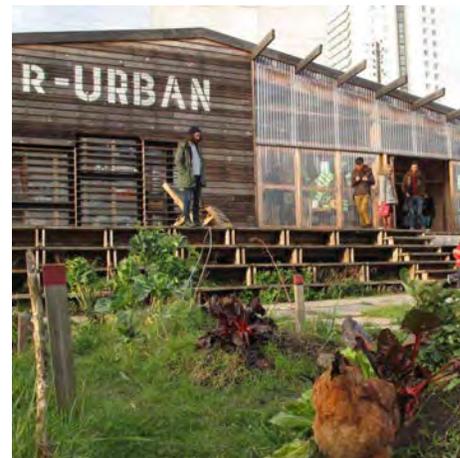
URBAN COMMONING

In the Urban Col/lab studios you will develop skills for critically researching, analyzing and conceptualizing precedents that act as catalyst for the bottom-up transformation of cities. You will learn to contextualize these spatial practices, and ultimately your own design practice, within a broader social, political and economic discourse. As we begin to better understand the forces at play in shaping the built environment and in turn how buildings shape us, you will learn to both question and sharpen the agency of architecture, and reflect on alternative more collaborative modes of design and radical imagination. You will further experience how what is often conceived as binary opposition between practice and theory, doing and thinking, can in fact be intricately linked and lead to invigorating synergies. The hypothesis here is that every reading of an urban milieu is also projective, every reflection on what is, entails a projection of what could have been, in short, design as *projection of an alternate possible future*. Accordingly, in this studio we will explore research based design as mode of looking back as means of looking forward.

Confronted with enduring financial crises, intense ecological pressures and the growing realization that neither State nor Market (alone) seem capable of delivering equitable access to and distribution of re-

sources and opportunities, more and more citizens the world over are taking matters into their own hands, self-organize and claim their right to the city. These diverse citizens' initiatives have brought the city to the center of discussions on social justice and solidarity economies: some speak of P2P, bottom-up urbanisms or the right to the city movement. Our case studies will explore these initiatives from the perspective of the commons.

Understood as distinct from public as well as private spaces, *spaces of commoning* emerge in the contemporary metropolis as sites in which self-managed rules, and forms of use, contribute in resisting and producing creative alternatives beyond contemporary forms of domination (such as class, gender or race). Spaces here are understood not only as shared resources or assets, but also as the production of new social relations and new forms of life in-common. The creative insights and energies developed in and around the debate on the commons promises to provide perspectives for a new economic, political, and social imag-



Agro-cité is one of three sites in R-URBAN, a network of resident-run facilities promoting urban resilience by the Paris based architecture office aaa (agence d'architecture autogérée).

"In Common space, in space produced and used as common, people do not simply use an area given by an authority (local state, state, public institution, etc.). People actually mold this kind of space according to their collective needs and aspirations (...) Whereas public space necessarily has the mark of an identity, *IS* (which means belongs to an authority), common space tends to be constantly redefined: commons space *HAPPENS* and is shaped through collective action."

- Stavros Stavrides in *Common Space: the City as Commons*, 2016

F17/S18



48-400/500 Studio

Instructors: Stefan Gruber (F17) Jonathan Kline (S18)
W/F +12:30-4:20

COMMONING THE CITY

*Granby Four Street,
Housing regeneration
project and CLT in
Liverpool by Assemble*



ination that helps articulate and build on the many existing struggles challenging the politics of accumulation and exclusion. In past decades, municipalities have steadily moved from a redistributive to an entrepreneurial mode of governing, insisting that “there is no alternative” (TINA). Countering the so-called TINA principal with what Susan George has coined as TATA! “there are thousands of alternatives!,” the commons debate insists that another world is possible and in fact already in the making. The Atlas of Commoning, and proposed exhibition will explore the possible role and agency of architecture within such alternatives. Can architecture overcome its complicity as a generic commodity in urban development, or as a signature icon competing for symbolic capital? Can architecture untangle itself from the positive feedback loop where it serves prevailing power structures, and instead gain its own critical agency to expose and foster processes of negotiation in urbanization? Is it possible to imagine architectural and urban design as anything else than a top-down practice? Can architecture ever be an emancipatory project?

With these questions in mind, we will investigate practices of commoning from a social, economic and political perspective, deliberately avoiding simple and ide-

alized notions of community, and instead focusing on commoning as a contentious process of encountering and negotiating differences. It is such antagonistic understanding of commoning, a process of claiming and reclaiming, that ultimately resonates with the political project that is the city. Based on these premises we will investigate local and international initiatives of living, producing and reproducing in common. Case studies will include architectural projects such as “City in the Making” a Rotterdam network of temporary work-live experiments, the Zurich based cooperative housing project Kraftwerk 1 modeled after the social fiction “bolobolo” or the community garden and neighborhood academy Prinzessinnen Gaerten in Berlin. At a larger scale we will study the municipalist movements in Spain, Italy or Brazil and the becoming-common of the public or becoming institution of the social. We will study their social contracts, how everyday habits consolidate into social codes and protocols, and trickle up, to define fields of power and social institutions that simultaneously render and are rendered by the material-spatial-organizational complexes of architecture and cities.

Learning from these cases we will begin imagining an architecture and urban design practice that shifts its attention from an obsession on form, to designing processes of engagement, from singular authorship, to relational thinking and distributed decision making, from obsessive control, to a more tactical approach to design that embraces contingencies and indeterminacy as opportunities.



*Case studies from
An Atlas of Commoning:
Top: Prinzessinnen Garten
and Nachbarschaftsakademie
in Berlin
Bottom: Wildgarten,
urban design by Arenas
Basabe Palacios
architects in Vienna*

F17/S18



48-400/500 Studio

Instructors: Stefan Gruber (F17) Jonathan Kline (S18)
W/F +12:30-4:20

Architecture of MOVEMENT

Hierarchy + Narrative in Complex Design

LaGuardia Airport New Central Terminal Complex



Master Plan
Aerial Rendering,
Concourse B Detail

While the perception and documentation of architecture is largely as a static object, the occupant's experience is inherently dynamic and fluid. This is especially so in the typology of transportation, which embodies the movement and interaction of large volumes and diverse streams of users and types of vehicles. Airport terminals in particular are among the largest and most complex structures built by human civilization, and can be considered the seminal typology of the globalized economy and culture of the late 20th and 21st centuries. This typology is also among the most rapidly evolving, driven by technological advances and socio-cultural changes, and is therefore in constant flux. This studio will challenge the student to address the full range of interrelated design issues of large complex

structures which must be understood and conceived both individually and as interdependent systems. Studio discussion and design will primarily address

Occupancy; hierarchy, narrative, sense of place, destination identity, wayfinding, etc., and Systems Integration; advanced comprehensive design; structure, mechanical systems, building envelope, sustainable design, etc.

The subject project will closely parallel the real project currently underway for the complete replacement of New York LaGuardia Airport's Central Terminal. Students will test and expand their conceptual and technical design skills in all key areas, with particular focus on exploring the rich and varied conceptual design opportunities arising from architectural, structural,

JFK Jake Douenias



F17



48-400/500
Hal Hayes
time TBD

Architecture of MOVEMENT

Hierarchy + Narrative in Complex Design

LaGuardia Airport New Central Terminal Complex



*La Guardia Central
Terminal Master Plan
Aerial Rendering*

infrastructural and mechanical systems at very large scale and with a high degree of complexity. Students will also define the complete design challenge through research and analysis of the building typology; the exceptionally dynamic functional rhythms, complex programmatic spaces with distinct systems, and a widely diverse user group with varying needs and desires, embracing and understanding the duality of the design paradigm, as a principal anchor and integral component of a global transport and communication network, yet with a need to be responsive to local environment, materials & methods, and cultural traditions.

Students will work in teams during the first four weeks of the semester in a robust pre-design exercise, analyzing the master plan proposal and site conditions, engaging with the professional AE design team working on the actual project, and developing studio-wide design goals

and performative objectives. During the bulk of the semester students will pursue an individual concept design for one of four concourses for the project based on these complex design parameters, learning design and planning methodologies to effectively address complex projects, balancing the needs of these parameters as an interdependent network of autonomous systems.

A field trip to New York will be made in September to visit the site, tour other recent terminal design projects and visit the offices of master plan architect SOM and building design architect HOK.

This studio will emphasize the use of hand sketching, physical models and iteration of design, research and analysis at varying scales and degrees of resolution. Students must also expand their mastery of digital and parametric tools for both analysis and conceptual/morphological design development.

*Eero Saarinen,
in model of TWA
Terminal, JFK, 1959*

*Field Trip & Site
Visit; The Port of
New York, Gateway
to a Continent;
Manhattan Piers,
Penn Station,
Grand Central
Terminal, JFK
Terminals 4 & 5
LGA Terminals A, B
& C, WTC Oculus.
September dates
TBD*

F17



48-400/500
Hal Hayes
time TBD

Architecture of MOVEMENT

Hierarchy + Narrative in Complex Design

Site

Central Terminal Concourses,
LaGuardia Airport, New York

Scope

The studio project requirements will closely parallel the real project currently being planned for the planned redevelopment, with students focusing on one of four concourses, new structures of approximately 18 gates, 100ksf connected to the main terminal by a bridge over a taxiway.

Focus

Students will test and expand their design and technical skills in all key areas, with particular focus in these three areas.

- Explore the rich and varied conceptual design opportunities arising from architectural, structural, infrastructural and mechanical systems at very large scale and with a high degree of complexity.
- Define the complete design challenge through research and analysis of the building typology; the exceptionally dynamic functional rhythms, complex programmatic spaces with distinct systems, and a widely diverse user group with varying needs and desires.
- Understand and embrace the duality of the design paradigm, as a principal anchor and integral

component of a global transport and communication network, yet with a need to be responsive to local environment, materials & methods, and cultural traditions.

Methodology

Students will first work in teams for the first four weeks of the studio in a robust pre-design exercise.

Analyze the existing building and site conditions

Engage with the professional AE design team members working on the actual project

Develop programmatic and performative goals and objectives

Students will then pursue Individual concept design for one concourse of the terminal based on these complex design parameters

Learn design and planning methodologies to effectively address complex projects

Balance the needs of these parameters as an interdependent network of autonomous systems

Emphasize the use of hand sketching, physical models and iteration of design, research and analytical work will at varying scales and degrees of resolution

Expand the mastery of digital and parametric tools for both analysis and conceptual development

Professionally document their individual and group work and publish it as a report to be distributed to the client and AE team

F17



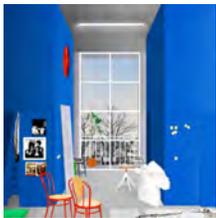
48-400/500
Hal Hayes
time TBD

HOUSING ARCHIPELAGO

New York Speculations on Density

"The commodification of housing means that a structure's function as real estate takes precedence over its usefulness as a place to live." "Our economic system is predicated on the idea that there is no conflict between the economic value-form of housing and its lived form. But across the world, we see those who exploit dwelling space for profit coming into conflict with those who seek to use housing as their home."

- David Madden and Peter Marcuse



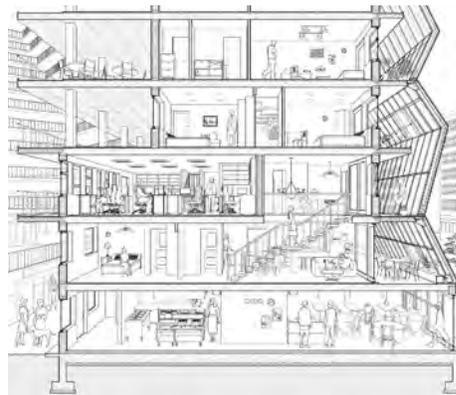
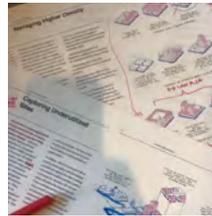
Inspirations in tension – Top: Dogma's monumental rationalist speculations on affordable communal housing; Bottom: Atelier Bow-Wow's residential projects with their figural and singular expressions of site, occupants and materials.

HOUSING ARCHIPELAGO

The Housing Archipelago project investigates the creation of everyday spaces of home and community within the increasingly inequitable urbanity of late capitalism. Through collective research paired with individual design projects, the studio will explore architectural strategies for creating affordable housing in the hypercommodified context of New York City on an archipelago of sites.

The studio will build on current planning and policy documents that analyze New York's affordable housing crisis and identify potential strategies and infill sites. However, our approach will diverge from the current neoliberal political and economic approach of treating housing as a market commodity, and instead focus on housing's underlying social use-value, rethinking urban housing as a flexible and affordable mix of spaces and uses that enable everyday life in the city.

In the first phase of the project students will work as a single team to research a range of affordability strategies and tactics, and explore how housing schemes can utilize them to respond to contemporary realignments in the relationship between family, work, and community. This phase will also include group research on housing design approaches and precedents, as well as site documentation and a trip to New York City.



In the second phase individual students will apply a set of affordability tactics from the research to one of the sites, and produce a housing focused architecture and urban design intervention. Initial conceptual design will utilize analog-only techniques of hand drawing and physical modeling, shifting to digital and hybrid media after mid-semester. For the final drawings and models the studio will adopt a shared graphic palette, building on the previous iteration of the Housing Archipelago studio as illustrated above.

The final phase of the studio will focus on editing and compiling the studio research and projects in to a set of booklets and refined drawings and models for a public exhibition.

Studio work from Housing Archipelago London, Spring 2017 – Top Left: Affordability Strategy and Tactics research booklet; Top Right: Exterior Rendering, KelliLaurel Mijares; Bottom Left: Section Perspective, Eugene Jahng; Bottom Right: Final Model, Elle Bai and Jessica Sved.

F17



48-400/500 Studio
Instructor: Jonathan Kline
W/F +12:30-4:20

HOUSING ARCHIPELAGO

MONDAY

WEDNESDAY

FRIDAY

Phase 1:
Research & Site
Documentation

- 1** 28 Aug
All School Meeting
Studio Set Up
- 2** 4 Sep
LABOR DAY
No Class
- 3** 11 Sep
No Class
- 4** 18 Sep
No Class

- 30 Aug
Syllabus
Exercise 1 & Reading 1 issued
- 6 Sep
Desk Crits - Draft 1.1
Reading Discussion 1
- 13 Sep
Desk Crits - Draft 1.2
Reading 2 Issued
- 20 Sep
Desk Crits - Draft 1.3

- 1 Sep
Desk Crits
- 8 Sep
REVIEW 1.1 Strategy & Tactics
Exercise 1.2 Issued
- 15 Sep
REVIEW 1.2 Housing Design Manual
Exercise 1.3 Issued
- 22 Sep
REVIEW 1.3 Site Atlas

Phase 2:
Housing Design
Explorations

- 5** 25 Sep (3:00-4:20)
Reading Discussion 2
Exercise 2.1 Issued
- 6** 2 Oct
No Class
- 7** 9 Oct
No Class
- 8** **16 Oct**
MID REVIEW
2.3 Conceptual Dev.
- 9** 23 Oct
No Class
- 10** 30 Oct
No Class
- 11** 6 Nov
No Class
- 12** 13 Nov
Desk Cits as Req.
- 13** 20 Nov
FINAL REVIEW
2.4. Schematic Design

- 27 Sep
Desk Cits
- 4 Oct
Desk Cits - Draft 2.2
- 11 Oct
Desk Cits 2.3
Reading 3 Issued
- 18 Oct
No Class
- 25 Oct
Reading Discussion 3
Exercise 2.4 Issued
- 1 Nov
Desk Cits
- 8 Nov
Desk Cits
- 15 Nov
Desk Cits
- 22 Nov
THANKSGIVING
No Class

- 29 Sep
Desk Cits - Draft 2.1
Exercise 2.2 Issued
- 6 Oct
REVIEW 2.1 & 2.2 Concept
Exercise 2.3 Issued
- 13 Oct
Desk Crits 2.3
- 20 Oct
MIDSEMESTER BREAK
No Class
- 27 Oct
Desk Cits
- 3 Nov
INTERIM REVIEW 2.4
- 10 Nov
Desk Cits
- 17 Nov
Desk Cits
- 24 Nov
THANKSGIVING
No Class

Phase 3:
Exhibit

- 14** 27 Nov
Group Workshop
- 15** 4 Dec
Desk Cits

- 29 Nov
Group Workshop
Desk Cits
- 6 Dec
Desk Cits

- 1 Dec
Group Workshop
Desk Cits
- 8 Dec
EXHIBITION HANG
Booklet Drafts Due

S 10 DEC
SUPER JURY

F17



48-400/500 Studio
Instructor: Jonathan Kline
W/F +12:30-4:20

INFRASTRUCTURE STUDIO

Forces Underlying Urban Form

INFRAstructure studio prepares future architects to find opportunities for design within nested systems of landscape, infrastructure and occupancy. The studio will focus on the relationship between urban infrastructure and an architectural scale of development. We will create inspiring places that improve the performance of urban systems, contributing to an evolving understanding of the [re]production of value.

This studio is part of a series of studios examining architecture's functional, spatial, experiential, and cultural relationship with urban infrastructure. Our studio will shift scales, understanding each scale as an opportunity for design. We will design places, but we will sometimes design systems or even engagements. You will expand your understanding of resource flows in placemaking, in system functioning, and how our designs and design processes can activate human experience.

INFRAstructure studio focuses about the forces that underly urban form. The studio will examine the dynamics of resource flow, whether it be water, mobility, food, or energy. We will examine the associated form logics to these resource flows and how those relationships change at different scales.

For the past years, this studio has focused on water and its shaping forces for culture, community, ecology, and urban fabric. Students in the studio develop the ability to read, map and represent system dynamics and formal characteristics related to water. Students develop skills to understand causal or correlative relationships and how systems evolve over time. Students understand the technical functioning of systems and how that can be generative or otherwise influence architectural form. Past studios have challenged the meaning of infrastructure as a heavily engineered or centralized system that underlies urban development. As our centralized industrial systems begin to age into obsolescence, the studios explore the role of decentralized solutions and how we might negotiate a new relationship with existing and emerging technologies.



F17



48-400/500
Christine Mondor
Day/Time TBD

INFRASTRUCTURE STUDIO

Forces Underlying Urban Form

Our studio will shift scales, understanding each scale as an opportunity for design. We will design places, but we will sometimes design systems or even engagements. You will expand your understanding of resource flows in placemaking, in system functioning, and how our designs and design processes can activate human experience.

OBJECTIVES ::

Technical Knowledge

We will develop technical knowledge of infrastructure (water, energy, food, or mobility) and how our it influences urban form and occupancy patterns. We will be introduced to the reciprocal forces of landscape ecologies and human occupancy and will build our skills at pattern reading in the urban landscape.

OBJECTIVES ::

Procedural Knowledge

We will be able to identify scales of change, the role of contingency in constructing scenarios, and the forces that influence change.

We will be introduced to the disciplinary expertise and methodologies of allied fields including ecology, hydrology, civil engineering, etc.,.

OBJECTIVES ::

Spatial & Experiential Knowledge

We will explore the human experience of infrastructure through spatial strategies, modeling and representation.



F17



48-400/500
Christine Mondor
Day/Time TBD

MOVING IMAGE

Liquid Thought

Introduction

The studio will explore experimental film with related theoretical texts and use these findings to speculate on a new architecture. The resulting designs will be represented in the medium of film but modeling, drawing and material construction will be used in the preparatory stages.

The course will consider new potentialities for an architecture composed through an understanding of time in space. A contemporary response will be developed with reference to the films of Teinosuke Kinugasa, Chris Marker and Hito Steyerl.

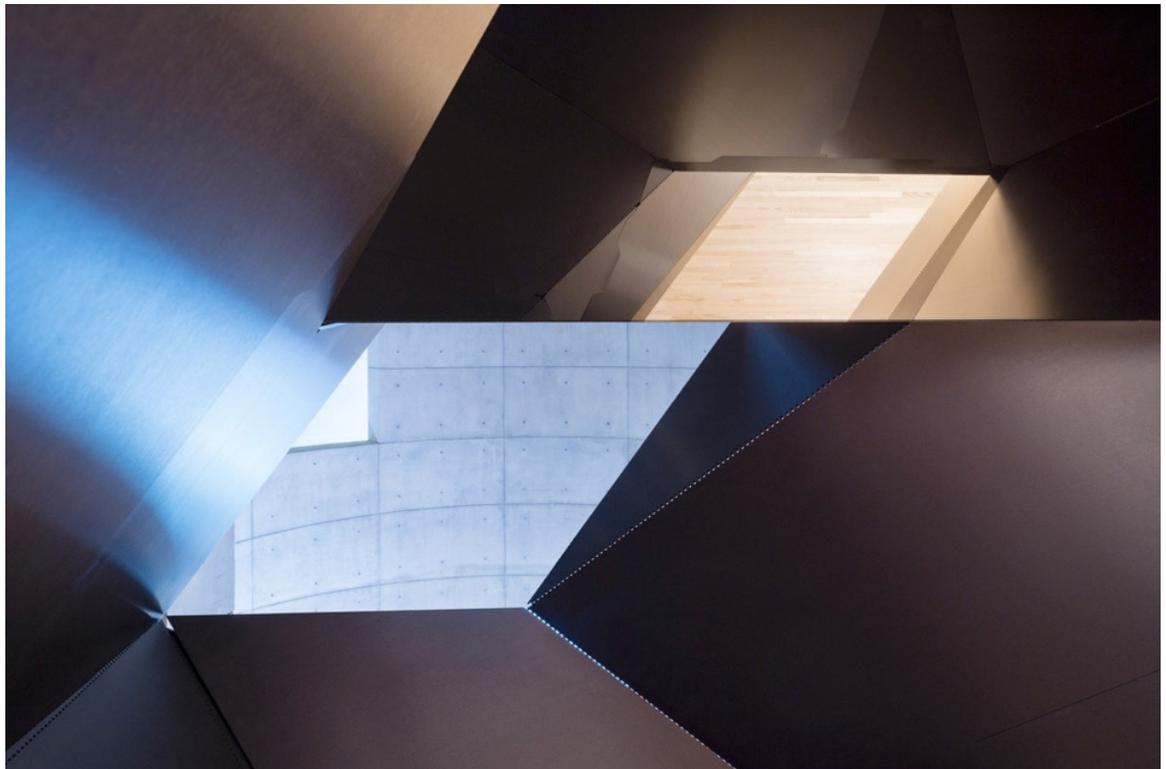
Ambition for the studio

1. *to engage in abstract thought, analyse genre, narrative, technique and affect in expanded cinema*
2. *to integrate complex levels of engagement in architecture - psychological, embodied, mnemonic, eidetic, social, economic, political and cultural.*
3. *to develop an architectural proposition which uses cinematographic space in an architectural way, that is speculative and innovative.*

.....the perspective of free fall teaches us to consider a social and political dreamscape of radicalized class war from above, one that throws jaw dropping social inequalities into sharp focus.

*Hito Steyerl,
The Wretched of the Screen,
2012 p28*

*Sarah Oppenheimer,
W 120301, Baltimore
Museum of Art*



S18



48-405/505 Studio
Mary-Lou Arscott
M/W 12.00-4.20pm

MOVING IMAGE

Liquid Thought



Body in movement

The design prompt for this studio is to consider the design of public spaces for the most intimate bodily rituals; drinking, urinating, defecating, washing, laundering, carrying out ritual ablutions. This space might be called a wash-house or a bathhouse, but as a studio we are going to think about it from first principals in relation to environmental biology and to culture.

Basic bodily functions, are pampered in spas, individualized as part of the societal imperatives and ignored for any person who has been marginalized. It is from Foucault that we understand that the body is a battle ground, where definitions are insisted upon to reinforce a power position, to satisfy convention and to protect from a constructed set of fears.

The studio will design for these bodily necessities with creative, positive and clear thinking. We will not be designing the Four Seasons Hotel, but we will be inventing a new public facility to include the excluded.

The title Moving Image-Liquid Thought is used to denote the joining of the potential of physical principals (eg of rain, rinsing and rotting) to be connected with a rich narrative of memory, dream state, fantasy and the surreal. These emotive and volatile factors are the realm of culture, find expression in cinema and the expanded cinema. The challenge in this studio's design process will be to explore the language of film and integrate an understanding of the sensory body in movement into an architectural composition.

*left, Wudhu ablution
top right, Pedro
Luis Raoto
bottom right, Monique
Jacot, Morges 1980*

S18



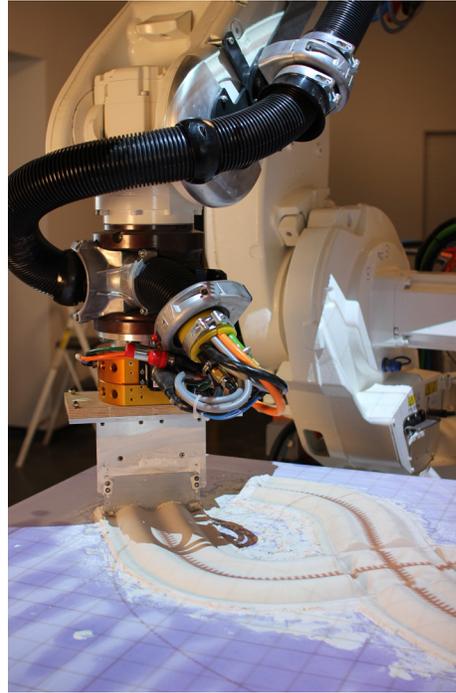
48-405/505 Studio
Mary-Lou Arscott
M/W 12.00-4.20pm

Low Relief

The virtual and material cultures of Architectural Deceit.



Column Capital in the Hall of Architecture at the Carnegie Museum of Art.



Robotic Tooling of a plaster running mould with real-time projection-mapped feedback.

INTRODUCTION

Modern Architecture championed 'Truthfulness' as a laudable virtue in the built environment. Many iconic modern architects preached and (mostly) practiced legibility of material, structure, and intent in building design. The repetition, flatness, anonymity of many contemporary cities represents the physical inheritance of this sensibility.

Despite Modern Architecture's insistence on truthfulness of material, architects before and since have deployed an array of techniques to trick the senses, including the use of faux materials, forced perspective, and applied media to walls and ceilings (e.g. fresco).

Low Relief will study the material cultures of deceit in architectural design and construction. The studio will explore

architectural illusion not just as a visual technique, but as a precise shaping of physical material and the blending of hybrid media forms in three dimensions. The motivating frame of *Low Relief* coincides with a proliferation of virtual reality in contemporary media, and seeks to position the built environment as a proto-virtual-interface.

If a latent virtuality exists in architecture's past can historical precedent frame the use of emerging digital technologies – like robotics, projection mapping, and reality capture – to explore new expressions of architectural duplicity? In order to address this question, *Low Relief* will use historical research, hands-on material play, and full-scale prototyping of architectural elements.

The studio will be co-located in the Carnegie Museum of Art and the SoA dFAB Robotics Lab. Student work will be exhibited in the Heinz Architectural Center as part of HACLab 2.0, Copy + Paste

Low Relief

Course Structure

Low Relief will promote critical design inquiry through three main projects supported by workshops throughout the semester. The projects are intended to reinforce each other with a deep dive into robotic fabrication of soft materials like plaster and a broad survey of historical construction techniques used to produce architectural illusions. The studio will split time and resources between the SoA robotics lab and CMOA Heinz Architectural Gallery, blending the cultures of lab based research and studio based inquiry.

Studio Partners

Low Relief will partner with the Carnegie Museum of Art (CMoA) and participate in HACLab 2.0, Copy + Paste. The museum's plaster cast collection in the Hall of Architecture will serve as a laboratory to consider the intersection of contemporary technologies and historic craft.

The studio will be co-located in the CMOA Heinz Architectural Center and the SoA dFAB Robotics Lab. Students will conduct and exhibit work in the Heinz Gallery two days per week.

Studio Assignments

P1_ Atlas of Architectural Deceit

A visual compendium of research exploring the material culture of deceit in architectural design.

(01.17 – 02.02)

Workshop 1 (01.27)

P2_ Cabinet of Curiosities

A modeling exercise exploring physical and virtual techniques of architectural illusion. Students will design and fabricate a furniture-scale artifact.

(02.05 – 03.02)

P3.1_ Inside Out

A fabrication exercise at full-scale exploring the interior architectural corner as virtual reality interface.

(03.02 – 03.30)

Workshop 2 (03.03)

P3.2_ Outside In

A fabrication exercise at full-scale exploring the exterior architectural corner as virtual reality interface.

(04.02 – 04.27)

Workshop 3 (04.01)

Note: see [course calendar](#) for a more detailed schedule



Low Relief

Studio Themes

In order to explore architecture's material duplicity, *Low Relief* will focus on:

Material play: exploring the affordances of plaster, a material that can be cast, cut, and carved in a variety of physical states from liquid to solid.

Robotic Fabrication: creating new robotic workflows to explore plaster.

Reality Computing: using 3D scanning and projection mapping to create hybrid virtual / physical artifacts.

Historical Precedent: learning from techniques like trompe l'oeil, scagliola, and anamorphic projection.

SUPPORTING COURSES

#48-368

Rediscovering Antiquity

Dr. Francesca Torello will be teaching, a seminar supporting the studio during the Fall 2017 Semester. Although encouraged, the course is not required for participation in the studio.

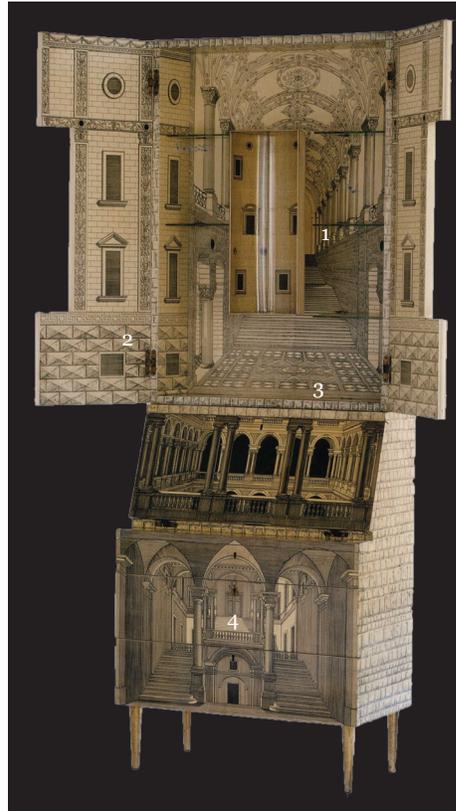
#48-455

Introduction to Architectural Robotics

This seminar will be offered in the Fall of 2017 and Spring of 2018. It is required as a pre-requisite or co-requisite for all studio participants.

Objectives core skills / concepts

- You can test ideas at full scale using material affordance to inform your design process.
- You can program, simulate, and execute basic robot paths.
- You can design and implement custom end of arm tools for fabrication.
- In addition to compelling representation, you can leverage digital tools to construct physical artifacts.
- You can leverage parametric workflows to efficiently manage complex fabrication tasks
- You can use detailed understanding of historical precedent to inspire design creativity.



Trumeau "Architettura" ('Architecture' Bureau), 1951 Lithographs on masonite, painted wood, metal, glass Archivio Fornasetti, Milan, Italy Piero Fornasetti (1913-88), Gio Ponti

PALLADIO institute+archive

Vicenza, Italy

This studio will consider how contemporary architecture and technology can integrate itself into the historic fabric of the Italian city. The studio will focus on a building to contain a study and information center for the works of Andrea Palladio located in Vicenza, Italy in the Piazza Matteotti. The project will consist of a building solution exhibiting a high resolution to the urban context and enclosure and construction systems that comprise a comprehensive building solution.

Studio Instructor:
Gerard Damiani,
Associate Professor

Research:
A comprehensive study of the formal systems of Andrea Palladio will be contrasted with the detailing methodology of Carlo Scarpa

Studio process: The studio will primarily work in physical models, 2d drawings and 3d freehand drawing techniques. Rhino will be introduced into the studio process only in the last few weeks of the project when the design and its details have been established through the drawings listed above. It is expected that your interest and creative output for this studio will go beyond the efforts of previous design studios with your development of a highly refined solution at many different scales.



Field Trip Option: A field trip visiting the works of Andrea Palladio to study the spatial and analytical systems present within the work will be contrasted by visiting the works of Carlo Scarpa and the study of the 1:1 detail. The final synthesis will be visiting the Bailo Museum in Treviso by Austrian Architect, Heinz Tesar. This field trip is to occur one week before the start of the spring semester.

Tentative Itinerary

Arrive Venice:

San Giorgio Maggiore: Palladio Foundation Querini Stampalia, Olivetti Showroom, La Biennale Ticket Booth, entrance of the LUAV main building: Scarpa (2 days)

Bus tours:

Bailo Museum in Treviso: H. Tesar
Brion Cemetery, Canova Museum and Cast Gallery, Scarpa
Emo, Foscari and Villa Barbaro (2 days)
Trip to Vicenza
Palladio within the city limits including Rotunda (2 days)

TOP
Andrea Palladio,
Teatro Olimpico

BOTTOM
Carlo Scarpa,
Canova Museum

*Studio field trip
guide & consultant:*
Francesca Torello,
Adjunct professor

S18



48-400/500 Studio
Instructor: Gerard Damiani
Times TBD

PALLADIO institute+archive



Trip dates, destinations, requirement and costs:

Wednesday, January 3rd

- International travel to Italy

Thursday, January 4th

- Arrive in Venice and check-in.
- Introductory talk about the city, the studio and trip expectations

Friday, January 5th

- Venice (City & Palladio)

Saturday, January 6th

- Venice (City & Scarpa)

Sunday, January 7th

- Travel day to Vicenza

Monday, January 8th

- Site visit and documentation

Tuesday, January 9th

- Vicenza Tour

Wednesday, January 10th

- Bus trips to Brion Cemetery and Museo Antonio Canova

Thursday, January 11th

- Travel back to Venice or Milan

Friday, January 12th

- Departure

Requirements:

- Trip is required as part of the studio
- Up to date Passport: Required
- Notify your health insurance company & contact your credit card company of your travel plans
- Attend minatory CMU Study Abroad Information Session in November

Preliminary Budget: Per Person

- Airfare: To be arranged by each student (Approx. \$1,100,00)
- Hostel lodging: \$500.00
- Food/ expenses: \$400.00

Ground Transportation costs: Supplied by the SOA

Admission fees: Supplied by the SOA



S18



48-400/500 Studio
Instructor: Gerard Damiani
Times TBD

Home Re_Defined

The Spring 2018 Urban Design Build Studio (UDBS) will develop work and expand research on the RE_CON 01 Affordable House Prototype and the HOME Inc.UBATOR design/engagement tool initiated during the fall of 2017. During the spring, emphasis will shift in bias from analytical/theoretical toward productive/physical in the development of modular pre-fabrication strategies that aspire to universal affordability objectives identified through the HOME RE_CONSIDERED studio. Production of the HOME Inc.UBATOR will provide a real time, full-scale platform for design decision making as work on permit drawings and construction documents for RE_CON 01 advances. Collaboration with students in the IDEATe Reality Computing program will employ the use of advanced visualization practices to enhance the efficacy of interactive virtual reality components included in the HOME Inc.UBATOR. Late spring deployment of Inc.UBATOR in the Homewood, Larimer, and East Liberty neighborhoods will provide an opportunity for the public to directly influence and understand late-stage design decisions in development of the RE_CON 01 Prototype. Work throughout the semester aspires to inform the creation of work that can be characterized as inclusive, durable, and of cultural relevance to future generations of the city.



As work associated with the HOME RE_DEFINED studio is predicated on a body of knowledge and research gained in the fall 2017 UDBS, participation in the HOME RE_CONSIDERED studio is a pre-requisite for participation in the Spring 2018 studio. Students enrolling in the studio should also be anticipating participation in the summer construction opportunities supported through paid UDBS internship. Skill sets and sensibilities developed in each UDBS ASOS and Co-requisite courses are intended to inform subsequent studios.

S18



48-405/505 UDBS
John Folan
M/W 12.30-4.20pm

Home Re_Defined

The structure is designed to enable students to progress through a sequence of Public Interest Studios as a focus, or participate in individual studios electively. UDDBS summer internships are reserved for students who have completed Urban Design Build Studios, and are offered based on demonstrated ability to accept responsibility.

The UDDBS is a vertically integrated, interdisciplinary studio. The studio will be composed of students from the Masters of Architecture (MArch), Masters of Architecture Engineering and Construction Management (AECM), Bachelor of Architecture (BArch), Masters of Urban Design (MUD), and IDeATe Reality Computing Programs. The studio will meet Mondays, Wednesdays, and Fridays from 1:30PM to 4:20PM. Students enrolled in the Urban Design Build Studio (UDDBS) HOME RE_DEFINED Studio are required to enroll in 48_496, PRACTICE RECONSIDERED (9CU). PRACTICE RECONSIDERED will meet on Mondays, Wednesdays, and Fridays from 12:30PM to 1:20PM. Mondays and Wednesdays will be utilized for collaboration with IDeATe in the Collaborative Making Center, Hunt Library.

This studio is generously funded by Autodesk, the Heinz Endowments, and the Urban Redevelopment Authority of Pittsburgh (URA). All construction work will be done in collaboration with the Trade Institute of Pittsburgh (TIP) and Construction Junction (CJ). Students will work shoulder to shoulder with populations representing the communities where the UDDBS practices.

S18



48-405/505 UDDBS
John Folan
M/W 12.30-4.20pm

Home Re_Defined

CONTEXT:

The UDBS is a Public Interest Design (PID) entity. Each individual enrolling in this studio recognizes that work is executed in communities, with residents served by the Urban Design Build Studio (UDBS). The UDBS works across the spectrum of scales from urban to ergonomic. With the enormous privilege that this opportunity provides comes responsibility. Work is done for clients with unmet needs, working to budget and schedule demands required to meet their needs. Students are expected to be present for all client meetings and participatory design sessions. The ability to realize a project through construction/implementation is earned, and not an entitlement. While every effort will be made to schedule community/client meetings during class time, client need/schedules will determine times outside of scheduled class. By enrolling in the UDBS, students understand and acknowledge that there are risks in travelling to and from work sites, meeting locations, and other studio related destinations visited regularly throughout the course of the semester. PROJECT RE_ is the primary construction/fabrication space utilized by the UDBS.

Students acknowledge understanding that PROJECT RE_ is an off-campus facility and that students are responsible for their own transportation to and from the facility. UDBS work includes physical labor and requires the utilization of construction tools/equipment that may cause bodily injury. Students acknowledge that they understand the risks associated with using the tools and do so of their own volition. The UDBS collaborates with organizations include individuals with previous legal violations and/or incarceration. The Trade Institute of Pittsburgh (TIP), a partner in PROJECT RE_, focuses its apprentice training on individuals re-entering society post incarceration. Students enrolling in this studio acknowledge that they understand the working conditions and have elected to participate in the studio of individual volition.

S18



48-405|505 UDBS

John Folan

M/W 12.30-4.20pm

ACUPUNCTURE URBANISM

Urban Collaboratory Studio



Höhenrausch, a temporary intervention in Vienna's second district by Fattinger, Orso with students of the Technical University Vienna.

„There is no architecture without action or without program (...) architecture's importance resides in its ability to accelerate society's transformation through a careful agencing of space and events.“

Bernhard Tschumi in the introduction to Event Cities

This Urbanism Studio will explore temporary use and tactical interventions as alternative instruments for tackling contemporary urban challenges. After decades of demographic decline and stagnation, Pittsburgh is growing again. But despite the overall optimism about the city's future, such a shift also causes fears and tensions. Who will really benefit from the renewed growth? What can be learned from past experiences of shrinking for (re-)defining measures of success for future urban developments? And can architects and urban designer contribute to more equitable urban developments or are their endeavors inevitably linked to gentrification and displacement? Here concepts of post-growth or degrowth are beginning to challenge productivist and positivist paradigms. In this studio we will experiment with temporary use as a way to encourage citizen engagement and the claiming of a collective right to the city. The studio will pursue the design

and realization of a full scale temporary intervention. The type of intervention is still contingent on funding and the access to vacant land or a building, but will most likely unfold in collaboration with other institutional partners.

In the course of the semester you will engage with the inductive reading and physiological understanding of an urban milieu—the analysis and interpretation of prevailing ecologies, inscribed cultural codes and socio-political forces at play—and develop a strategy that identifies neuralgic points of intervention promising to have a catalytic effect beyond its site, or Acupuncture Urbanism. Thus you will learn to combine abstract systemic thinking with very concrete and hands-on action, in short, to think global and act local. You will be encouraged to be bold and radical in terms of the changes you aspire to, yet humble and pragmatic in how these are implemented. Accordingly, the studio will expand the

S18



48-400/500 Studio
Stefan Gruber
day + time TBD

ACUPUNCTURE URBANISM

“The right to the city is (...) far more than a right of individual access to the resources that the city embodies: it is a right to change ourselves by changing the city more after our heart's desire. It is, moreover, a collective rather than an individual right since changing the city inevitably depends upon the exercise of a collective power over the processes of urbanization.”

Davie Harvey
Stavros Stavrides
in *Common Space: the City as Commons*, 2016

notion of spatial production beyond the mere design of buildings to the design of situations and events, embracing temporality and performativity as essential dimensions in architecture. In a post-growth mindset, we will focus on teasing out the latent potentials in the already-existing, using techniques of re-assembling, retrofitting and recycling. Moreover the studio will work collaboratively, challenging the notion of singular authorship, experimenting with how to include neighbors and other stakeholders as co-designers.

Temporary Use in the City as Archipelago

In times of accelerated transformation and limited predictability, the timeframe in which architecture and cities can be planned or act responsively has become very narrow. As a result, contemporary design strategies have to act fast, react and adapt effectively to changing

conditions, constraints and stakeholders. Thus we need to approach design iteratively and embrace the unpredictable. In response to accelerating cycles of economic, ecological and political crises designer need to seek new urban strategies—not with the intent to advocate for the replacement of the master plan as a planning method altogether, but to explore alternative, topological design methods.

With the gradual demise of the welfare state, city administrations since the 1980s have moved from a redistributive to an entrepreneurial mode of governing. Concerned with stimulating private investment, municipal planning efforts have increasingly focused on already privileged strata of the population, giving rise to an archipelago of highly developed enclaves amidst a sea of left-over and derelict territories. Such island urbanism causes the spatial discontinuities and social polarization characteristic of the post-Fordist city. Meanwhile it is



Allmende Kontor, temporary urban garden on the former airport Tempelhof in Berlin.

S18



48-400|500 Studio
Stefan Gruber
day + time TBD

ACUPUNCTURE URBANISM

"If there is to be a "new urbanism", it will not be based on the twin fantasies of order and omnipotence; it will be the staging of uncertainty; it will no longer be concerned with the arrangement of more or less permanent objects but with the irrigation of territories with potential..."

Rem Koolhaas, "Whatever happened to urbanism", SMLXL

precisely the areas that are neglected by planners, the state and the market – zones seemingly worthless in traditional real estate terms – that also present opportunities for the development of alternate forms of urbanity and of co-inhabiting the city. "Only here, beyond the controlled enclaves can temporary, informal and innovative urban practices emerge," argue the Berlin-based group Urban Catalysts in their exploration of informal temporary use (Oswalt, Overmeyer, Misselwitz 2013).

Through their practice, artists and architects have long contributed to open up unlikely territories for urban development, often compensating for a lack of financial capital with individual initiative, hands-on know-how, social skills and the power of imagination. Instead of building anew, they urbanize by re-discovering, re-interpreting and re-programming what already exists—colonization gives way to accessing underused resources. Equipped with a heightened sensibility for latent potentials and a distinct pragmatism for minimal interventions, their work is highly contextual and user based. But the success of their initiatives ultimately depends on community involvement, co-production and self-management. In fact, these so-called urban practitioners often see their role rather as the one of a facilitator or intermediary between self-organization and established urban planning procedures. Thus they contest the dualism between mere top-down and bottom-up interventions and open the discussion for negotiating between two seemingly incompatible paradigms. Both are essential for the vitality and resilience of any urban milieu. But the moment in which the formal and informal begin

to intersect, the spaces in which the interests of municipalities, the market and alternative urbanities overlap also harbor the greatest potential for conflict. In effect, artists' and architects' endeavors to improve the built environment often comes hand-in-hand with processes of gentrification and displacement.

The question then becomes how to render such conflicts, the encounter of differences productive? How to conceptualize and transform the interstitial spaces that emerge from an archipelago urbanism and that are subject to continuous deterritorialization into the arena of an agonistic city? Can temporary use and tactical interventions provide sites for encounters and discussions on how to live together and the kind of urban future we aspire to?

No cars on Broadway: Times Square, New York
Janette Sadik-Kahn's transformation of Times Square was implemented gradually, starting with a temporary use experiment.

THE KITCHEN MONUMENT by RAUMLABOR is a mobile inflatable sculpture that expands into a temporary public space. Different programs are staged in different places.

The CINEROLEUM: a derelict petrol station on Clerkenwell Road, London transformed by ASSEMBLE into a hand-built cinema.



S18

48-400/500 Studio
Stefan Gruber
day + time TBD

FROZEN MUSIC

The Architecture of Performance

Sibiu International Theater Festival New Theater

"Music is liquid architecture; Architecture is frozen music." Johann Wolfgang von Goethe

Goethe's famous quote succinctly captures the idea that all creative disciplines, specifically architecture and music, similarly express humanity's creativity in different media. Issues of rhythm, structure, harmony, hierarchy, sequence and balance are certainly present in both regardless of function. The architectural typology of performance, embodying music, drama, dance and other forms, is perhaps where

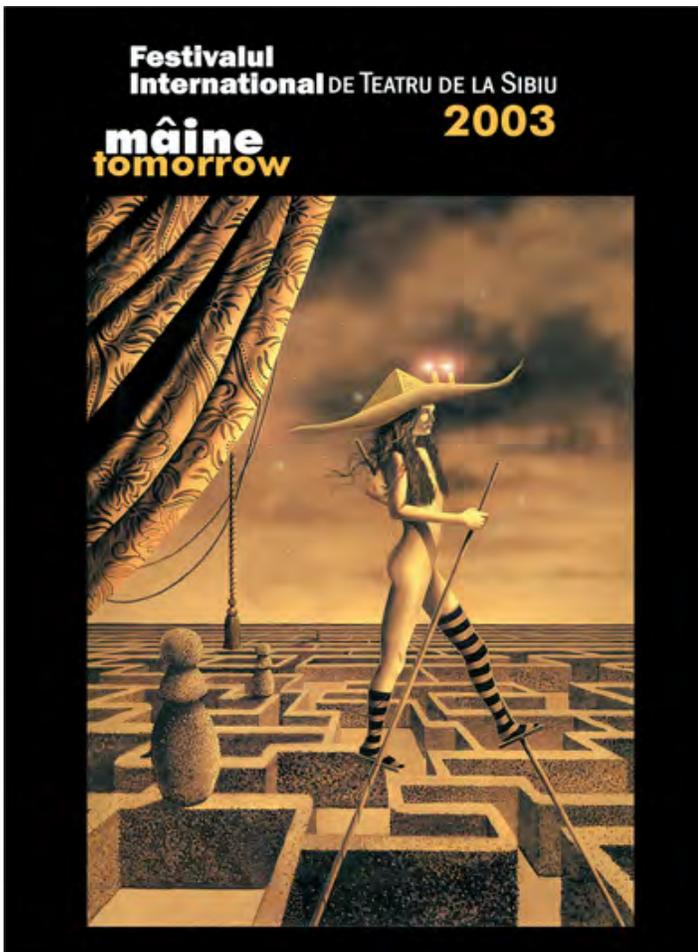
this dialog and synergy can be most effectively and poignantly addressed. This studio will challenge the student to define and understand the inherent geometric patterns and modularity in the program, mass, volume, structure, occupancy and systems of a complex building. Students will conceive alternative design responses which will be tested and refined at varying degrees of concept resolution. Studio discussion and design will primarily address

Form; composition & structure
"designed to find a successful mean between the opposite extremes of unrelieved repetition and unrelieved alteration." Percy A. Scholes, *The Oxford Companion to Music*
Texture; rhythm & harmony in the combination and integration of interdependent design elements and conceptual threads.

The subject project envisions the first purpose-built permanent theater and a theater design laboratory for the Sibiu International Theater Festival (SibFest), which is third largest performing arts festival in Europe. During 10 days in June over 3000 artists and 600,000 spectators from around the world converge on this UNESCO World Heritage Site, transforming the city's architectural patrimony into a wide variety of historic, surprising and awe-inspiring performance venues.

Jean-Guy Lecat
Project Statement

"Sibiu is a UNESCO World Heritage Site, a perfectly preserved medieval city in Romania which has the third biggest theatre festival in the world. We plan to build a new theatre there which can be another very interesting work for us together. This theatre we will have a permanent laboratory studying new ways of building theatres or theatre sets. I will do a workshop this next June (2017) to start this laboratory, for international students, and we would like to exhibit the work of your Avignon studio there."



S18



48-405|505
Hal Hayes
Time/day TBD

FROZEN MUSIC

The Architecture of Performance

Sibiu International Theater Festival New Theater

This studio will emphasize the use of hand sketching, physical models and iteration of design, research and analysis at varying scales and degrees of resolution. Students must also expand their mastery of digital and parametric tools for both analysis and conceptual morphological design

ASOS students will collaborate with Drama and Masters of Arts Management (MAM) students to study and design this facility. We will travel to the site to meet with SibFest directors working on the real project and work directly with famed French theater scenic designer Jean-Guy Lecat, who has invited us to develop the project concept with him. During the first third of the semester inter-disciplinary teams of Architecture, Drama & MAM students will program and conceptualize the facility, which will become the basis of design for professional architecture & engineering partners in Europe. During the remainder of the semester Architecture students will conceive individual designs for the permanent facility, extending the collaboration with Drama and MAM students.



This studio is part of the Theater Architecture concentration, and is the result of a direct invitation to participate in this real project from M. Lecat & the Sibiu International Theater Festival, extending the partnership

which began in Spring 2017 with a project for the Festival d'Avignon.

Co-Requisites; Theater Architecture I & II 62:408 - Mini 3, (6) & 62:418 - Mini 4 (3), (co-taught with Dick Block, Drama Associate Head & Scenic Design Professor)

Selective; 48:587 (9) Architectural Lighting (Cindy Limauro, Architecture & Drama Professor of Lighting) Field Trip; The Eastern Hapsburg Empire; Vienna, Budapest & Sibiu, January 6-16 (CMU Crowdfunding & SoA's Altenhof Scholarship may partially subsidize student cost)

Additional Faculty: Kathryn Heidemann (Heinz College Associate Head & Arts Management Program Director)

Studio Schedule

The studio will include a mandatory field trip to Avignon and the south of France during the last week of winter break.
Week 0, January 6-16 – Field Trip to Sibiu, Budapest & Vienna
Week 1; Site Analysis, Precedent Studies, Establish Project Goals & Objectives
Week 2-4; Pre-Design, Programming & Planning
Weeks 4-8; Concept Design Alternatives
Weeks 8, Midterm Review & Concept Confirmation
Weeks 9-16; Design Development
Weeks 15; Penultimate Review
Week 17; Final Exhibition

S18



48-405|505
Hal Hayes
Time/day TBD

FROZEN MUSIC

The Architecture of Performance

Site

On the edge of the historic center of Sibiu.

Scope

Students will work on a semester-long individual project for a flexible 500-seat performance chamber and an experimental theater design laboratory. Interdisciplinary collaboration with drama & arts management students in the co-requisite theater architecture seminar will be the basis for team research, programming and planning for the new chamber.

Focus

This studio will explore the seminal integration of two art forms; performance art and architecture, and study how they may be adapted, reinterpreted, and further developed to serve the needs and capitalize on the technological opportunities of the 21st century.

- Explore the rich and varied conceptual design opportunities arising from the interaction of mostly fixed architectural structure and systems with mostly dynamic theater sets and systems.



FESTIVALUL INTERNAȚIONAL
DE TEATRU DE LA SIBIU

2012

- Define the complete design challenge through research and analysis of the building typology; the exceptionally dynamic functional rhythms, complex programmatic spaces with distinct systems, and a widely diverse user group with varying needs and desires.
- Understand the opportunities of experimentation while learning to identify realistic constraints.

S18



48-405|505
Hal Hayes
Time/day TBD

FROZEN MUSIC

The Architecture of Performance

Itinerary: January 4-14

Vienna, 1/4-8: Secessionist Architecture, Art & 19th Century Urbanism (Otto Wagner, Josef Hoffman, Gustav Klimt et al.)

Budapest, 1/9-11: Jugendstil Architecture (Ödön Lechner, Béla Lajta et al.)

Sibiu/Transylvania, 1/12-14: Medieval walled city, Bran (Dracula's) Castle

Travel Budget: \$1,750

Air fare - \$900 (NYC - Vienna)

Rail fare - \$200 (Vienna, Budapest, Sibiu, return)

Accommodations - \$250 (\$25/day)

Meals - \$250 (\$25/day)

Incidentals - \$150 (\$15/day)

Optional Early Arrival, 1/1-14: +\$300

add Venice, 1/1-4

Vienna, Budapest & Sibiu/Transylvania as above

Optional Late Arrival, 1/9-14: -\$300

Omit Vienna

Budapest & Sibiu/Transylvania as above

Funding Sources

Berkman Grant: Publications and Translation (Pending)

Theater Architecture Fund/J.R. Clancy Endowment: Faculty Travel

Altenhoff Scholarship: Student Travel (for eligible SoA students)

CMU Crowdfunding: Student Travel (all students)



S18

48-405|505

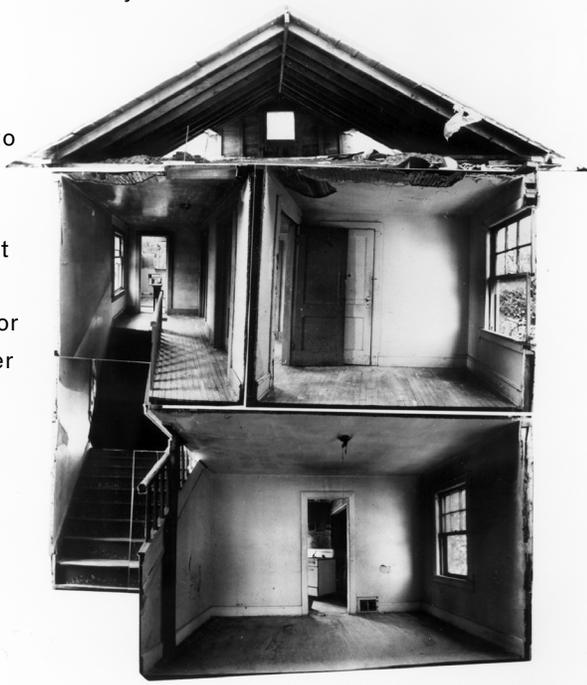
Hal Hayes

Time/day TBD

Deconstructing Blight

The 2018/2019 Urban Design Build Studio (UDBS) will utilize the city of Pittsburgh's register of condemned buildings to assess tactical deconstruction strategies, material harvesting opportunities, and upcycled material processes, that can aid in the elimination of blight and creation of authentic, place based architecture. DECONSTRUCTING BLIGHT will set the table for a year-long exploration of the relationship between built infrastructure, policy, and alternative/innovative forms of material use in the design, development, and construction of affordable Single Family Housing Prototypes. Addressing dramatic shifts in regional housing needs that have precipitated over the past 60 years, this Public Interest Design (PID) studio will utilize participatory design processes to collaborate with residents, neighborhood partners and NGO's on developing viable urban housing strategies that can continue to evolve as the regional population and housing stock age. As the first studio in a design-build sequence, enrollment in DECONSTRUCTING BLIGHT will require a commitment from students for the fall semester 2018, spring semester 2019, and expectation of opportunity for paid UDBS Internship during the summer of 2019 to fulfill construction/implementation responsibilities.

The locus of work will be the Homewood and Larimer neighborhoods of Pittsburgh, Pennsylvania; communities that have been adversely affected by broader demographic trends influencing the region's built landscape. Statistically, over 52% of the existing housing stock in Pittsburgh was built prior to 1940. Tidal shifts in population due to generations of population loss have caused much of that housing to remain vacant and/or in a state of substantial disrepair. While development has accelerated in certain areas of the city, several of Pittsburgh neighborhoods remain ranked amongst the most vacant in the country. Those neighborhoods can benefit from the development of appropriate, alternative housing strategies predicated on lower density.



F18



48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

Deconstructing Blight

As a municipality, Pittsburgh has recognized the need for lower density strategies, widely investing in demolition as a solution to blight. In the five-year period between 2010 and 2015, 2,519 properties were demolished by the city. While creating an opportunity for future, alternative development strategies, the act of demolition has numerous negative consequences. It erodes sense of place, communicates a devaluation of generational culture, creates enormous stress on the environment, and creates expensive landfill maintenance burdens on municipalities. Most of the material that makes its way to landfill is not approaching the end of its useful lifespan and could be re-integrated into new construction.

Deconstruction is a socially, economically, and environmentally beneficial alternative to demolition. It is the systematic process of dismantling a structure or its parts, piece by piece, to salvage and harvest the components for reuse. Deconstruction converts reclaimed materials to commodities of maximum value. And, deconstruction establishes value that is both monetary and phenomenological, strongly maintaining constancy with place. By contrast, demolition is the valueless act of destruction to remove waste.

With an emphasis on creating value, the studio will explore the broader systemic potential that deconstruction promotes through closed loop consumerism; reducing both financial and environmental stresses associated with maintenance of landfills, and exploring the additional benefit of job creation.

Over the course of the semester, the UDBS will analyze the natural and built landscapes in Larimer and Homewood, gain intimate knowledge of deconstruction processes, identify material inventories/supply chains, and collaborate with industry partners/stakeholders on the development of potential project strategies. To achieve these objectives, the studio will 1) work closely with the PROJECT RE_ Deconstruction crew on the dissection/dismantling of a condemned structure to gain nuanced understanding of processes through experience; 2) extend a research partnership with IDEATe utilizing Reality Computing applications to catalogue existing vacant structures, identify viable material for deconstructive harvesting, inventory potential of material for up-cycle construction at mass scale, visualize transformed landscapes, and 3) design, develop, and prototype full-scale material assemblies for the integration into RE_CON 02 housing prototypes.

F18



48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

Deconstructing Blight

The DECONSTRUCTING BLIGHT studio is a component of a broader Public Interest Design continuum established by the UDBS and PROJECT RE_. This studio provides a pre-text for work in the Spring 2019 UDBS ASOS, RECONSTRUCTING AUTHENTICITY, and anticipated opportunity for subsequent Summer 2019 UDBS Paid Internship. Skill sets and sensibilities developed in each UDBS ASOS and Co-requisite courses are intended to inform subsequent studios and the implementation of work through jurisdictional review processes. Taking a project from initial concept through the completion of construction requires commitment over the entire one year projected timeline. UDBS summer internships are reserved for students who have completed a sequence of two (fall and spring) Urban Design Build Studios, and are offered based on demonstrated ability to accept responsibility. The structure of the UDBS sequence is designed to afford students an opportunity to participate in a one year long sequence in the fulfillment of a Public Interest Design agenda. The focus of each UDBS sequence evolves with issues of regional and global significance.

The studio is open to 4th and 5th year undergraduate students in the BArch program. Undergraduate 4th year BArch students enrolling in the UDBS, and interested in developing an expertise/focus in Public Interest Design may elect to continue to work with the UDBS in the 5th year of the program.

The UDBS is a vertically integrated, interdisciplinary studio. The studio will be composed of students from the Masters of Architecture (MArch), Masters of Architecture Engineering and Construction Management (AECM), Bachelor of Architecture (BArch), Masters of Urban Design (MUD), and IDeATe Reality Computing Programs. The studio will meet Mondays, Wednesdays, and Fridays from 1:30PM to 4:20PM. Students enrolled in the Urban Design Build Studio (UDBS) DECONSTRUCTING BLIGHT Studio are required to enroll in 48_493, REPRESENTING ACTIVISM (9CU). REPRESENTING ACTIVISM will meet on Mondays, Wednesdays, and Fridays from 12:30PM to 1:20PM. Portions of each Monday and Wednesday studio session will be utilized for collaboration on Reality Computing strategies related to augmented and adaptive technologies with IDeATe in the Collaborative Making Center, Hunt Library.

This studio is generously funded by Autodesk, the Heinz Endowments, and the Urban Redevelopment Authority of Pittsburgh (URA). All construction work will be done in collaboration with the Trade Institute of Pittsburgh (TIP) and Construction Junction (CJ). Students will work shoulder to shoulder with populations representing the communities where the UDBS practices.

F18

48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

Deconstructing Blight

CONTEXT:

The UDBS is a Public Interest Design (PID) entity. Each individual enrolling in this studio recognizes that work is executed in communities, with residents served by the Urban Design Build Studio (UDBS). The UDBS works across the spectrum of scales from urban to ergonomic. With the enormous privilege that this opportunity provides comes responsibility. Work is done for clients with unmet needs, working to budget and schedule demands required to meet their needs. Students are expected to be present for all client meetings and participatory design sessions. The ability to realize a project through construction/implementation is earned, and not an entitlement. While every effort will be made to schedule community/client meetings during class time, client need/schedules will determine times outside of scheduled class. By enrolling in the UDBS, students understand and acknowledge that there are risks in travelling to and from work sites, meeting locations, and other studio related destinations visited regularly throughout the course of the semester. PROJECT RE_ is the primary construction/fabrication space utilized by the UDBS.

Students acknowledge understanding that PROJECT RE_ is an off-campus facility and that students are responsible for their own transportation to and from the facility. UDBS work includes physical labor and requires the utilization of construction tools/equipment that may cause bodily injury. Students acknowledge that they understand the risks associated with using the tools and do so of their own volition. The UDBS collaborates with organizations include individuals with previous legal violations and/or incarceration. The Trade Institute of Pittsburgh (TIP), a partner in PROJECT RE_, focuses its apprentice training on individuals re-entering society post incarceration. Students enrolling in this studio acknowledge that they understand the working conditions and have elected to participate in the studio of individual volition.

F18



48-400/500 UDBS
John Folan
M/W 12.30-4.20pm

COMMONING THE CITY

Urban Col/lab I & II

OVERVIEW

This two semester research-based studio sequence is focused on the bottom-up transformation of cities. The first semester, taught by Stefan Gruber, will focus on group case study research, and individual design project proposal development. The second semester, taught by Jonathan Kline, will support students in developing their individual proposed design projects. The fall studio will include an international research trip in a city to be determined. This studio is required for all second year Master of Urban Design students. ASOS Students may take the fall or the fall and spring as a sequence, but not the spring only.

URBAN COMMONING

For the 2018/19 academic year the Urban Col/lab studio will continue the research theme of urban commoning. Understood as distinct from public as well as private spaces, *spaces of commoning* emerge in the contemporary metropolis as sites in which self-managed rules and forms of use contribute in resisting, and producing creative alternatives beyond contemporary forms of domination (such as class, gender or race). Spaces here are understood not only as shared resources or assets, but also as the production of new social relations and new forms of life in-common.

FALL: RESEARCH-BASED DESIGN

During the fall semester the studio will collectively produce an "Atlas of Commoning," assembling case studies that critically explore practices of urban com-



New st. pauli district, Hamburg by NL architects + BeL, which grew out of PlanBude a bottom-up transdisciplinary effort created by the community.

moning, and embed them in a broader context of societal transitions. Students will research both assigned and self-identified cases, and produce summaries and comparisons in a shared graphic format to be developed collectively.

SPRING: DESIGN-BASED RESEARCH

Building on our collective research, the spring studio will focus on developing individual thesis and design proposals exploring the theme of urban commoning. For the project students will be expected to take a personal position and formulate a thesis, expressed and explored through design. The site, program and general parameters of the project will be determined during the fall, allowing students to gather data and base materials over the winter break. The final phase of the of the project will collect and compare the studio's work in a set of final documents utilizing the shared graphic format developed in the fall.

"In Common space, in space produced and used as common, people do not simply use an area given by an authority (local state, state, public institution, etc.). People actually mold this kind of space according to their collective needs and aspirations (...) Whereas public space necessarily has the mark of an identity, *IS* (which means belongs to an authority), common space tends to be constantly redefined: commons space *HAPPENS* and is shaped through collective action."

- Stavros Stavrides in
Common Space: the City
as Commons, 2016

F18/S19

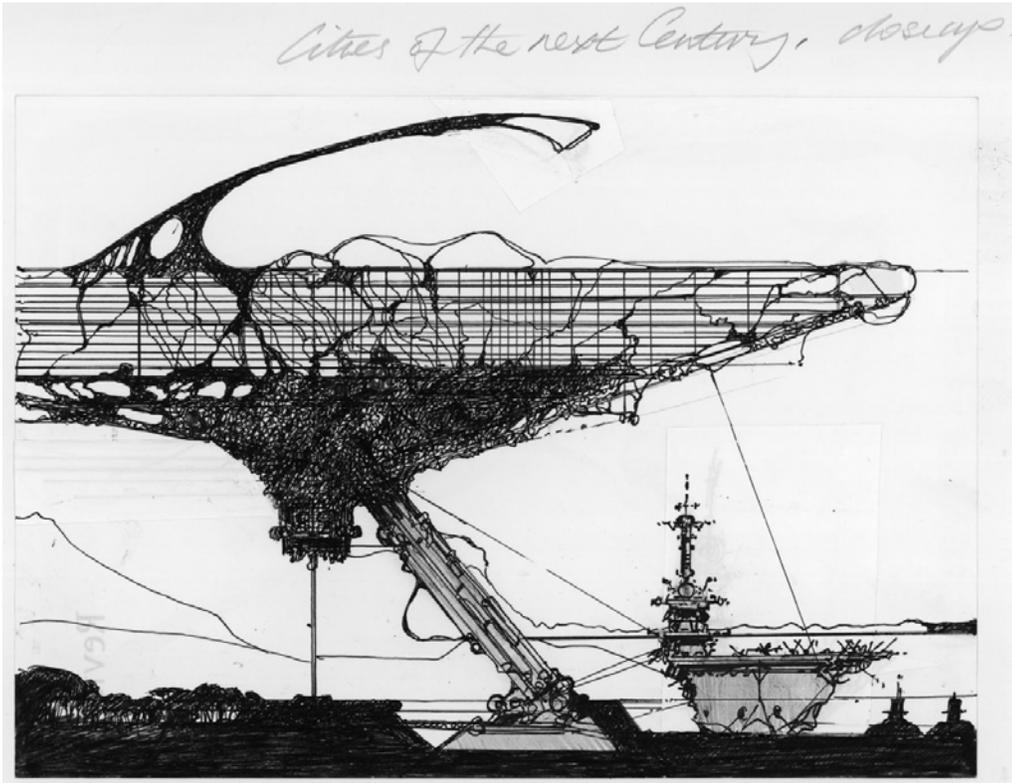


48-400/500 Studio
Instructors: Stefan Gruber (F17) Jonathan Kline (S18)
W/F +12:30-4:20

SUSTAINABLE megastructure

Density & Complexity in the 21st Century City Hudson River Pier 76 Redevelopment

Field Trip & Site Visit; New York Harbor, the Economic Engine of a Continent; Midtown Manhattan, Hudson and East River Piers. September dates TBD



As growing populations and economies increasingly stress natural resources and ecosystems one thing has become clear; increasing development density within established urban environments is the most sustainable form of growth. Sites formerly considered too burdensome, such as railyards and brownfields, have now become among the most desirable development sites in the planets most vibrant megacities. Such development is needed to address and respond to major environmental and climatic changes which the building environment is affected by and in turn affects.

This studio will challenge the student to address the full range of complex, interrelated design issues of a new major intermodal transportation terminal combined with large, dense mixed use program. Students will explore structure, infrastructure systems and building morphology on a grand scale, with major new program integrating with already vast existing buildings and systems.

*A. Boutwell,
City for the Next
Century, c. 1970*

F18



48-400/500
Hal Hayes
time TBD

SUSTAINABLE megastructure

Density & Complexity in the 21st Century City Hudson River Pier 76 Redevelopment

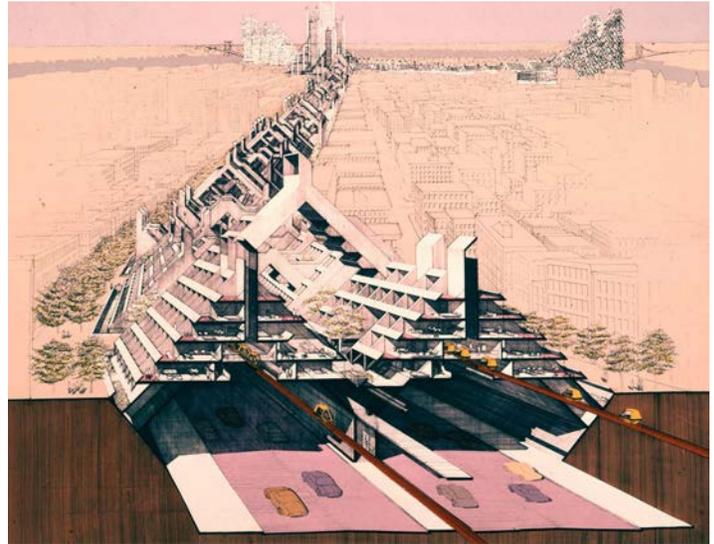
A. Sant'Elia, *La Nuova Stazione di Milano*, 1914

P. Rudolph, *Lower Manhattan Expressway*, 1971

L. Woods, *The Proto-Urban Campus*, 2008

Studio discussion and design will primarily address;

- Massive Density & Complexity; design and context of megastructures, supertalls, groundscrapers, symbiotes and parasites etc., and
- Sustainable Systems Integration; transportation, water conservation/recycling, power generation, district thermal and other systems.



This studio will emphasize the use of hand sketching, physical models and iteration of design, research and analysis at varying scales and degrees of resolution.

Students must also expand their mastery of digital and parametric tools for both analysis and conceptual/morphological design development.

The subject project is the redevelopment of New York's Hudson River Pier 76 into a major intermodal transportation terminal that will incorporate the existing adjacent ferry terminal and heliport. It will also link into and expand the Javits Convention Center and provide recreation space and amenities for the Hudson River Park in a sensitive waterfront location adjacent to the Hudson Yards development. Students will test and expand their conceptual and technical design skills in all key areas, with particular focus on exploring issues arising from architectural, structural, infrastructural and mechanical systems at very large scale and extreme complexity.

Students will research and study successful and unsuccessful historic precedents, from the futuristic visions of Antonio Sant'Elia through the unbuilt megastructures of Paul Rudolph and the contemporary theories of Lebbeus Woods.

F18



48-400/500
Hal Hayes
time TBD

MULTIPLIED GROUNDS

Creating a City within the City

CITYWITHIN A CITY

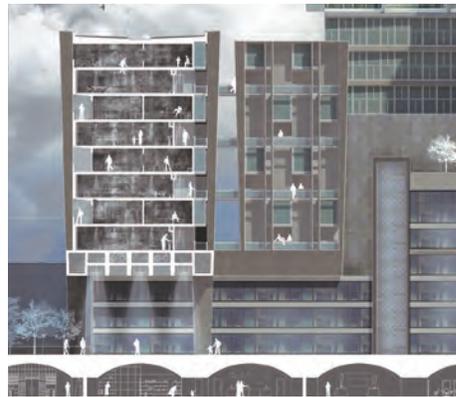
This studio will explore the architecture of the city through the design of a complex mixed-use urban enclave, a city within the city. Through collective research paired with group design projects, the studio will investigate the creation of everyday spaces of home, work and community within the increasingly inequitable urbanity of late capitalism.

This studio will pursue an approach that argues "for the autonomy of the project, for the possibility of architectural thought to propose an alternative idea of the city rather than simply confirming its existing conditions."

- Pier Vittorio Aureli

The project will build on a current real world development program and site in a city still to be determined. However, our approach will diverge from the current neoliberal political and economic approach of treating housing and development as a market commodity, and instead focus on architecture's underlying social use-value, rethinking urban living and working as a flexible and affordable mix of spaces and uses that enable everyday life in the city. The project's focus on an urban enclave will also allow for exploration of the balance between community autonomy and the public life of the city.

In the first phase of the project students will work as a single team to research a range of affordability strategies and tactics, and explore how architecture can utilize them to respond to contemporary realignments in the relationship between family, work, and community. This phase will also include group research on design approaches



and precedents, as well as site documentation and trip to the project site.

In the second phase teams of two or three students will apply a set of affordability tactics from the research to the site and program, and produce a mixed-use architecture and urban design intervention. Initial conceptual design will utilize analog only techniques of hand drawing and physical modeling, shifting to digital and hybrid media after mid-semester. For the final drawings and models the studio will adopt a shared graphic palette.

The final phase of the studio will focus on editing and compiling the studio research and projects in to a set of booklets and materials for a public exhibition.

Studio work from Multiplied Grounds London, Fall 2016 – Top Left: Plan, Gary Li, Noopur Suckhlecha, Charmaine Yau and Nahyung Kim; Bottom Left: Section Elevation, Yasmeen Almuhanna and Jenny Wong; Top Right: Unit Perspective, Catherine Zanardi and Cesar Neri; Bottom Right: Unit Axo, Fah Kanjanavanit and Eugene Jahng.



Inspirations in tension – Top: O.M. Ungers' typomorphological enclave for Roosevelt Island; Bottom: The utopian modernist fragment exemplified by Chamberlin, Powell and Bon's Barbican Estate.

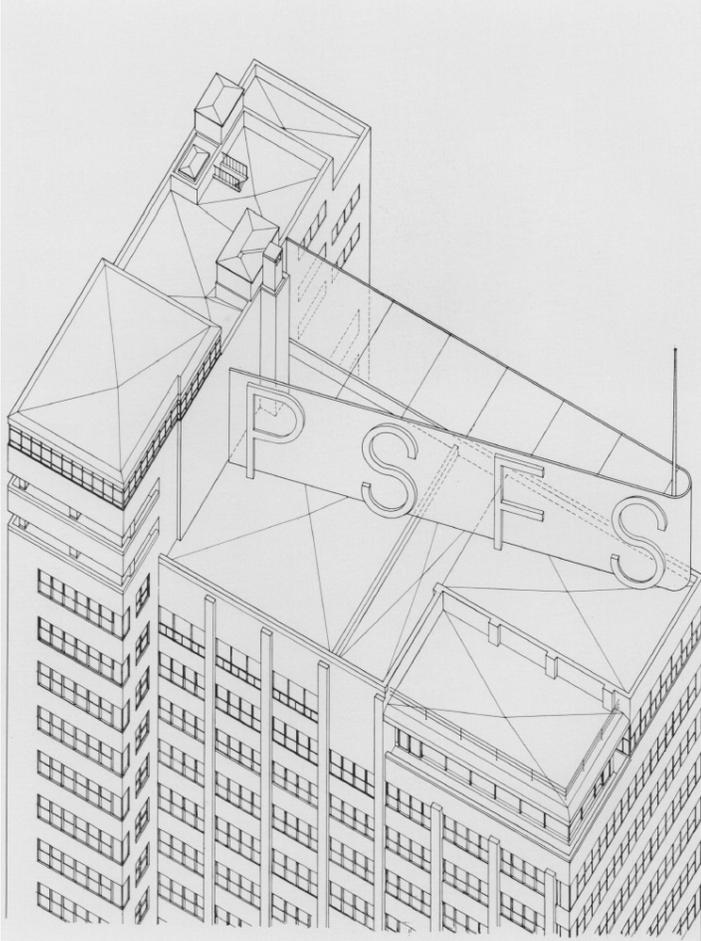
F18



48-400/500 Studio
Instructor: Jonathan Kline
W/F +12:30-4:20

HIGH RISE CONSTRUCTION

A New Office Tower for Pittsburgh



*PSFS,
Howe and Lescaze,
1935*



The last work of architect William Lescaze, a high rise at One Oliver Plaza (1969) in Pittsburgh, was an unsurprising and less ambitious example of the vertical tower, unlike his revolutionary PSFS high rise in Philadelphia (1935) which was a tour de force of both construction innovation and detailing. This studio will focus on the history, technology and detailing of the vertical tower construction type.

*Studio Instructor:
Gerard Damiani,
Associate Professor*

Drawings and models will go beyond the expectations of previous design studios with the intent of a resolved solution at many different scales.

Research: A comprehensive study of the vertical tower will be the basis of the studio. Field trips to the offices of architects and engineers who have expertise with this construction type will be part of the research component of the studio. Rigorously drawn and analyzed case studies will be part of the studio working process. A comprehensive knowledge and application of structure, system integration and building organization will be central to the studio.

S19

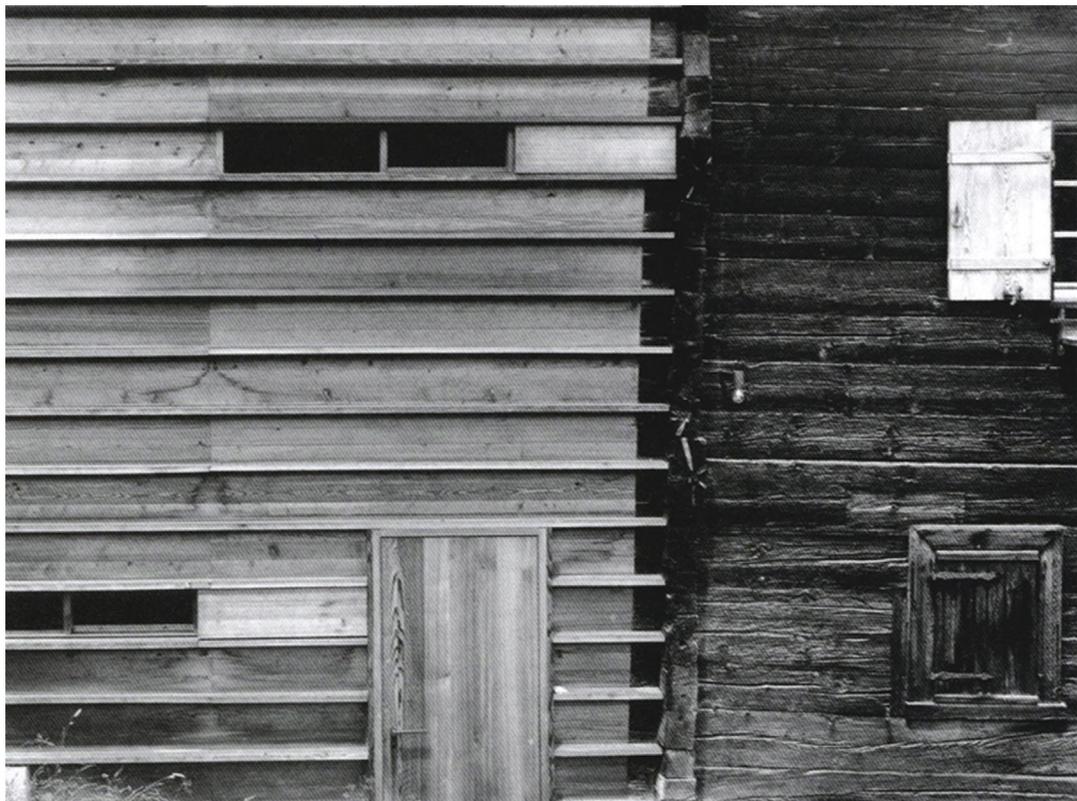


48-400/500 Studio
Instructor: Gerard Damiani
Times TBD

Reconstructing Authenticity

The Spring 2019 Urban Design Build Studio (UDBS) will develop work and expand research on the relationship between built infrastructure, policy, and alternative construction practices initiated during the fall of 2018. During the spring, emphasis will shift in bias from analytical toward physical in the development and demonstration of construction processes that exploit potential of Design for Deconstruction (DFD) in need based, single family housing for populations earning 80% of the median income. Understood as an emerging concept, DFD borrows from the fields of design for disassembly,

reuse, manufacturing, and recycling in consumer product industries – all upcycle design and fabrication processes. Considering the regional social, economic and environmental factors influencing the built landscape in Pittsburgh, UDBS design work will leverage the merits of upcycle DFD practice and compliment practices with downcycle DFD principles in an effort to create an authentic, place specific, housing prototype (RE_CON 02) for the Larimer neighborhood of Pittsburgh; **RECONSTRUCTING AUTHENTICITY** from material that previously contributed to blight.



S19



48-405|505 UDBS
John Folan
M/W 12.30-4.20pm

Reconstructing Authenticity

RE_CON 02 will incorporate re-purposed/harvested material elements extracted from the deconstruction of housing and building stock investigated during the fall semester of 2018. Harvested materials will be sympathetically matched with modular pre-fabricated building elements and systems as a mechanism for exploring potential of replication of housing at scale. With the articulated mission of producing appropriate, affordable, and replicable solutions, the UDBS will aspire to produce work that is inclusive, durable, and of cultural relevance to future generations of the community. Over the course of the semester, the UDBS will focus on the development of design, permit, and construction documents that will facilitate construction during the summer of 2019. The process will involve iterative, full-scale physical prototyping and testing of developmental DFD strategies that support Public Interest Design (PID) aspirations embedded in program and associated realms of social justice. Translation of drawing to building will be central to processes with digital workflows involving Data Capture and BIM explored through the IDeATe Reality Computing collaboration.

As work associated with the RECONSTRUCTING AUTHENTICITY studio is predicated on a body of knowledge and research gained in the fall 2018 UDBS, participation in the DECONSTRUCTING BLIGHT studio is a pre-requisite for participation in the Spring 2019 studio. Students enrolling in the studio should also be anticipating participation in the summer construction opportunities supported through paid UDBS internship. Skill sets and sensibilities developed in each UDBS ASOS and Co-requisite courses are intended to inform subsequent studios. The structure is designed to enable students to progress through a sequence of Public Interest Studios as a focus, or participate in individual studios electively. UDBS summer internships are reserved for students who have completed Urban Design Build Studios, and are offered based on demonstrated ability to accept responsibility.

S19



48-405|505 UDBS

John Folan

M/W 12.30-4.20pm

Reconstructing Authenticity

The UDBS is a vertically integrated, interdisciplinary studio. The studio will be composed of students from the Masters of Architecture (MArch), Masters of Architecture Engineering and Construction Management (AECM), Bachelor of Architecture (BArch), Masters of Urban Design (MUD), and IDeATe Reality Computing Programs. The studio will meet Mondays, Wednesdays, and Fridays from 1:30PM to 4:20PM.

Students enrolled in the Urban Design Build Studio (UDBS) RECONSTRUCTING AUTHENTICITY Studio are required to enroll in 48_494, BEYOND PATRONAGE (9CU). BEYOND PATRONAGE will meet on Mondays, Wednesdays, and Fridays from 12:30PM to 1:20PM. Mondays and Wednesdays will be utilized for collaboration with IDeATe in the Collaborative Making Center, Hunt Library.

This studio is generously funded by Autodesk, the Heinz Endowments, and the Urban Redevelopment Authority of Pittsburgh (URA). All construction work will be done in collaboration with the Trade Institute of Pittsburgh (TIP) and Construction Junction (CJ). Students will work shoulder to shoulder with populations representing the communities where the UDBS practices.

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48-405|505 UDBS
John Folan
M|W 12.30-4.20pm

Reconstructing Authenticity

CONTEXT:

The UDBS is a Public Interest Design (PID) entity. Each individual enrolling in this studio recognizes that work is executed in communities, with residents served by the Urban Design Build Studio (UDBS). The UDBS works across the spectrum of scales from urban to ergonomic. With the enormous privilege that this opportunity provides comes responsibility. Work is done for clients with unmet needs, working to budget and schedule demands required to meet their needs. Students are expected to be present for all client meetings and participatory design sessions. The ability to realize a project through construction/implementation is earned, and not an entitlement. While every effort will be made to schedule community/client meetings during class time, client need/schedules will determine times outside of scheduled class. By enrolling in the UDBS, students understand and acknowledge that there are risks in travelling to and from work sites, meeting locations, and other studio related destinations visited regularly throughout the course of the semester. PROJECT RE_ is the primary construction/fabrication space utilized by the UDBS.

Students acknowledge understanding that PROJECT RE_ is an off-campus facility and that students are responsible for their own transportation to and from the facility. UDBS work includes physical labor and requires the utilization of construction tools/equipment that may cause bodily injury. Students acknowledge that they understand the risks associated with using the tools and do so of their own volition. The UDBS collaborates with organizations include individuals with previous legal violations and/or incarceration. The Trade Institute of Pittsburgh (TIP), a partner in PROJECT RE_, focuses its apprentice training on individuals re-entering society post incarceration. Students enrolling in this studio acknowledge that they understand the working conditions and have elected to participate in the studio of individual volition.

S19



48-405|505 UDBS

John Folan

M/W 12.30-4.20pm

4-D ARCHITECTURE

Dynamic Design for Dynamic Demand

The NYC World Trade Center Performing Arts Center

While architectural space is largely three-dimensional and static, human occupancy is inherently four-dimensional and dynamic. This semester we will study and design hyper-flexible performance spaces which respond dynamically to an artist's creative vision and the audience's evolving desires.

The World Trade Center Performing Arts Center (PAC) is the most anticipated, and controversial, addition in a generation to Manhattan's rich performing arts ecosystem. This 1200-seat three-theater complex is a real project currently in design and planning. Site, program and all constraints will be the same as those with which the professional design team is working, requiring students to develop mastery of the technical realities of performance productions, construction methodologies, structural & mechanical systems and community/stakeholder activism. Students will meet with the real client, potential users, public officials and the professional design team involved in the project, learning to analyze and understand the needs of these distinct occupant groups and use those needs as the fundamental basis of concept ideation. Design is also informed and shaped by the cultural significance and structural constraints of this uniquely meaningful and complex site.

ASOS students will collaborate in study & design with Drama and Masters of Arts Management (MAM) students. During the first third of the semester inter-disciplinary teams of Architecture, Drama & MAM students will analyze the site, study precedents and define planning and programming criteria. During the remainder of the semester Architecture students will conceive



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48-405|505
Hal Hayes
Time/day TBD

4-D ARCHITECTURE

Dynamic Design for Dynamic Demand

The NYC World Trade Center Performing Arts Center

individual designs for the theater complex in collaboration with the Drama and MAM students.

This studio is part of the Theater Architecture concentration.

Co-Requisites; Theater Architecture I & II 62:408 - Mini 3, (6) & 62:418 - Mini 4 (3), (co-taught with Dick Block, Drama Associate Head & Scenic Design Professor)

Selective; 48:587 (9) Architectural Lighting (Cindy Limauro, Architecture & Drama Professor of Lighting)

Field Trip & Site Visit; Broadway & Beyond, Manhattan's Rich Performing Arts Ecosystem. September date TBD

Additional Faculty: Kathryn Heidemann (Heinz College Associate Head & Arts Management Program Director)

Occupancy is the act of inhabiting space. Inhabitation can be either static or active. While space is three-dimensional and largely static, occupancy is inherently four-dimensional and active.

Activity results from both the movement of occupants through space and/or the occupants' experience of changes occurring in the spaces they inhabit. Through studying, understanding and interpreting those changes, student architects will learn to conceive and shape spaces to meaningfully and effectively serve, support and transform the occupants' experience.

Program. The World Trade Center Performing Arts Center is the most anticipated addition to Manhattan's rich performing arts landscape in a generation. This 1200-seat flexible theater complex is a real project in the planning and design stages. Site, program and all constraints will be the same as the professional design team is working with. Students will also develop mastery of the technical requirements of performance art through this class and co-requisites 42:408 & 418, Theater Architecture I & II.



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Hal Hayes
Time/day TBD

4-D ARCHITECTURE

Dynamic Design for Dynamic Demand

The NYC World Trade Center Performing Arts Center

Users. Students will meet and interact with the real client, potential users and public officials involved in the project during a site field trip and at interim reviews. Student architects will learn to analyze and understand the needs of these distinct occupant groups and then use that understanding as the fundamental basis of design concept. Drama student colleagues from 48:408 will also be an in-house resource and review group throughout the duration of the studio.

Site; World Trade Center Performing Art Center (PAC), New York City. Immediately adjacent to the 9/11 Memorial and One World Trade Center megastructure, the 35ksf parallelogram site is one of the most visible of the new World Trade Center master plan. Design is also informed and shaped by the cultural significance and structural constraints of this uniquely important site.



This studio will emphasize the use of hand sketching, physical models and iteration of design, research and analysis at varying scales and degrees of resolution. Students must also expand their mastery of digital and parametric tools for both analysis and conceptual/ morphological design development.

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48-405|505
Hal Hayes
Time/day TBD

**ADVANCED
SYNTHESIS
OPTION
STUDIOS**

S°/-

F17-S19