

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
M.S. Arch (R) Schedule
Fall 2021

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

GradSemUrbanStu ARCH 483.28 Ames,Variable 10-11:50AM Rm 712F 2 credits	Grad Thesis Tutorial ARCH 402 10AM-12:50PM Vidler Rm 305CS*** 2 credits	Grad Sem Tech ARCH 482.34 Kallipoliti 10-11:50AM Rm 712F 2 credits	GradSemThHistCrit ARCH 485.32 Pollak 10-11:50AM Rm 712F 2 credits
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GradSemUrbanStu
ARCH 483.08
Ockman
1-2:50PM
Rm 712F/online
2 credits

Grad Sem Tech
ARCH 482.35
Smith
1-3:50PM
Rm 215F
2 credits

Grad Sem Tech
ARCH 482.29
Palacio,Baglione,
Tzavelis,Wooton
11-11:50AM
503CS***
1 credit

Grad Sem Tech
ARCH 482.36
Lokko
12-1:50PM
online
2 credits

Shop Tech
FA 100RA
Leonard/Hutchings
Monasterio/Russakis
1-2:50PM
Rm 430F
1 credit

GradSemThHistCrit
ARCH 485.53
Franch
12-1:50PM
Rm 712F/online
2 credits

2PM

Grad Sem Tech
ARCH 482.37
Ayub
3-4:50PM
Rm 712F/online
2 credits

Grad Design
ARCH 412
Young
2-5:50PM
Rm 314F
6 credits

Grad Design
ARCH 412
Young
2-5:50PM
Rm 314F

Grad Sem Tech
ARCH 482.02
Oppenheimer
6-7:50PM
Rm 315F
2 credits

Grad Design
ARCH 412
Young
2-5:50PM
Rm 314F

GradSemThHistCrit
ARCH 485.52
Akawi
3-4:50PM
Rm 712F
2 credits

***Room located in
41 Cooper Square

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Fall 2021 Graduate Seminar Course Descriptions (Returning M.S.Arch students)

ARCH 482.02 GRADUATE SEMINAR IN TECHNOLOGIES

Nat Oppenheimer
Wednesday 6-7:50PM
Room 315F
2 credits

Arch 482.02 is a seminar course that will explore complex structural concepts through case studies of built projects. The course will begin by exploring failures (both well-known and lesser known) and then move into a variety of built projects. Throughout the course, each project will be studied, and the choices made by the designers interrogated. Why the use of certain materials? Why choose longer spans and fewer columns or shallower floors and more columns? Ultimately, the intent is to put the structural knowledge gained in prior courses into an overall context and giving the students further understanding of structures in order to fulfil the requirements of the National Architectural Accrediting Board (NAAB) criterion B.5 (2015), "Structural Systems: *Ability* to demonstrate the basic principles of structural systems and their ability to withstand gravity, seismic, and lateral forces, as well as the selection and application of the appropriate structural system".

ARCH 482.29 GRADUATE SEMINAR IN TECHNOLOGIES

Julian Palacio (Architecture), Melody Baglione (MechE), Cosmas Tzavelis (CivE), David Wooton (MechE)
Thursday 11-11:50AM
Room 503CS

1 credit

SOLAR DECATHALON

The project continues via the VIP (Vertically Integrated Projects) research initiative in which students work in multidisciplinary teams led by faculty, contributing to their research, innovation, and/or design efforts. Students earn 1 credit each semester, with three semesters minimum "adding up" to a typical 3-credit hour course. Students are encouraged to participate for at least 3 semesters and up to 6 semesters, providing deeper learning experiences and leadership opportunities. The long-term nature of VIP creates an environment of mentorship, with faculty and graduate students mentoring teams, experienced students.

"The U.S. Department of Energy Solar Decathlon® is a collegiate competition, initiated in 2002, that has grown to showcase much more than solar technologies. Today, the 10 contests that are the foundation of Solar Decathlon inspire student teams to design and build highly efficient buildings powered by renewables, while optimizing for key considerations including affordability, resilience, and occupant health. The winners are those teams that best blend architectural and engineering excellence with innovation in how their building interacts with the world around it. Simply put, there's nothing else like it." For more info: <https://www.solardecathlon.gov/>

ARCH 482.34 GRADUATE SEMINAR IN TECHNOLOGIES

Lydia Kallipoliti
Thursday 10-11:50AM
Room 712F/online
2 credits

PARALLEL HISTORIES OF ECOLOGICAL DESIGN

This course will document the intersection of architecture and design with ecology, environmental history, governance and law. We will examine conflicting definitions and concepts of architects and designers and the parallel histories of their intellectual positions toward environmental thought from the 19th century to today. The term *ecological design* was coined in a 1996 book by Sim van der Ryn and Stewart Cowan, in which the authors argued for a seamless integration of human activities with natural processes to minimize destructive environmental impact. However, *ecological design* harks as far back as Ernst Haeckel's definition of the field of ecology and Henry David Thoreau's manual for self-reliance. Since World War II, contrary to the position of ecological design as a call to fit harmoniously within the natural world, there has been a growing interest in a form of synthetic naturalism, where the laws of nature and metabolism are displaced from the domain of wilderness to the domain of cities, buildings, and objects. Unlike van der Ryn and Cowan's argumentation, which focused on a deep appreciation for nature's equilibrium, ecological design might commence with the synthetic replication of natural systems. Ecological design arguably starts with the reconceptualization of the world as a complex system of flows rather than a discrete compilation of objects, which visual artist and theorist György Kepes has described as one of the fundamental reorientations of the 20th century. We will survey the formation of this field, not chronologically, but in connected worldviews, each rendering evolving perceptions of nature, its relation to culture, and the occupation of the natural world by human and non-human subjects.

ARCH 482.35 GRADUATE SEMINAR IN TECHNOLOGIES

Austin Wade Smith
Monday 1-3:50PM
Room 215F
2 credits

SYNTHESIS/DISTINCTION

SYNTHESIS/DISTINCTION is an investigation in design technology and creative agency through prototyping. Throughout the course students traverse, in series, emerging methods in digital fabrication and computation, from foundational details to more complex assemblies. The exercises follow a research format, focused on the social and ecological implications of creative production. Throughout the process, the course mediates between the distinctions of digital logic, and the synthesis of analog practices within the larger design field. Class exercises pair distinctions and synthesis, tools and integrations, challenging students to extend, play, and continuously negotiate the poetic potential of digital

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craft within a social and ecological milieu. The course provides a foundation to a wide array of technical and theoretical approaches to design through digital fabrication and creative computation, meant to supplement and expand existing coursework. Sessions are split between lectures and dedicated workshop / build time, reflecting a reciprocal approach of thinking through making. Students are expected to read, discuss, and build, in 2-3 week long exercises, including a final project. On occasion, this course may meet on a Saturday.

Registration with permission of the instructor, austin.smith@cooper.edu.

ARCH 482.36 GRADUATE SEMINAR IN TECHNOLOGIES

Mae-ling Lokko

Thursday 12-1:50PM

online

2 credits

COUNTER-ARCHITECTURES OF 'SUPER'FOODS

From supermarkets to superfoods, contemporary cultures of food production and consumption are based on the illusion that the crowning designation of “*super*” status represents a reliable global economic boom in-play rather than a signal of an expanding cyclical agricultural crisis. Taking culinary history and its artifacts as the primary pathway of inquiry and documentation, the first half of this seminar will explore the spatial impacts of superfood cycles stemming specifically from 19th century global botanical networks and 20th century farms' race on changes on local cuisine, culinary infrastructures and ecologies. The second phase of the seminar will focus on the design and prototyping of a piece of culinary technology on the scale of “kitchenware” to be used in the preparation of cooking recipes which embody practices of nutrient recovery, surplus transformation or repair within integrated food cycles.

Mae-ling Lokko is an architectural scientist and building technology researcher from Ghana and the Philippines whose work centers on the upcycling of agrowaste and biopolymer materials into high performance clean building material systems for humidity control, indoor air quality remediation and water quality control applications. Lokko holds a Ph.D. and Masters of Science in Architectural Science from the Center for Architecture, Science and Ecology, Rensselaer Polytechnic Institute and B.A from Tufts University. Her research integrates a broad range of technical, environmental, social and cultural criteria that questions contemporary material-value systems, codevelops business models for upcycling between the Global North and South and evolves material life cycle design criteria to meet generative justice criteria. Lokko teaches on seminars on energy and ecology in relation to the built environment, upcycling and ecoeffective material life cycle design both at the SoA and at the Center for Architecture, Science and Ecology in Industry City, Brooklyn. Lokko is the founder of Willow Technologies, Ltd. based in Accra, Ghana that upcycles agrowaste into affordable biobased building materials and for water quality treatment applications. Her work was nominated for the Visible Award 2019, Royal Academy Dorfman Award 2020 and she was a finalist for the Hublot Design Prize 2019. Lokko's recent projects has exhibited globally at the Serpentine Gallery, London (2019), Radialsystem, Berlin (2019), Royal Danish Academy of Fine Arts (2019), Luma Foundation, Arles (2019), 4th Istanbul Design Biennial (2018), Rhode Island School of Design (2018), Royal Institute of British Architects-North as part of the Liverpool Biennial 2018 and at the Mmofra Foundation, Accra (2017-present). In 2020, her work will be exhibited at Somerset House, London and as part of Sonsbeek Biennial 2020, Netherlands.

ARCH 482.37 GRADUATE SEMINAR IN TECHNOLOGIES

Zulaikha Ayub

Monday 3-4:50PM

Room 712F/online

AESTH-ETHICS, GAS EXCHANGES, & THE RIGHT TO BREATHE

What does it *mean* to breathe? This course investigates the legal and scientific forms by which breathing is understood, specifically in order to reveal the myriad of environmental, racial, and economic injustices that condition such a crucially life-sustaining process. Our work begins with the assumption that no two breaths are ever the same, and that respiration is a deeply spatial, temporal, and material entanglement. We will also examine specific cases of breathing injustice(s), paying particular attention to what forms of expression (i.e visual, aural, textual, informatic, etc.) are necessary for registering such stories. The ultimate goal of the seminar is to have class participants develop further case studies and methods for expressing breathing injustice(s), with the possibility of contributing to an art exhibition scheduled for 2022 in Philadelphia. As part of an ongoing set of seminars entitled "Gas Exchanges & the Right to Breathe" taught at the LoPh Lab (www.lo-ph.agency) and University of Applied Arts - Vienna, we will have the opportunity to engage in conversation with other students who have breathing injustice(s) projects already under way, including:

- the architecture of weaponizing air against incarcerated protestors
- the erasure of intergenerational cancer transmission by nuclear weapons agencies
- the politics of air filtration, e-waste, and poverty in New Delhi
- the production of racial violence in medical autopsies

Students from all three disciplines are encouraged to attend. Please feel free to contact the instructor for more information ahead of the fall semester (zayub@lo-ph.org).

Trained as an architect, **Zulaikha Ayub's** research is mostly concerned with the apparatuses of media, secrecy, and technology in relation to the Manhattan Project and subsequent nuclear armaments. Reading across valences of drawing, image, science, and text, and adopting methodologies from critical geography, new materialism, nuclear studies, and media archeology in addition to architecture, her aim is to more accurately portray these histories and their entanglements with the present. Zulaikha is Co-Director and Head of Expressions for the LoPh Lab (www.lo-ph.agency), and founding member of the Graphe critical geography collective (www.geo-graphe.org). She holds a B.Arch. degree from the Cooper Union, an MDesS degree (with Distinction) from Harvard University, and is completing her Ph.D. dissertation at Princeton University entitled “Translations from Drawing to Bombing (and Other Disarrays).” She has taught graduate and undergraduate design studios, lectures,

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and seminars at Pratt Institute, City College of New York, Mississippi State University, Catholic University of America, and Mountainview Correctional Facility.

ARCH 483.08 GRADUATE SEMINAR IN URBAN STUDIES

Joan Ockman

Monday 1-2:50PM

Room 712F/online

2 credits

NEW YORK AS INCUBATOR OF TWENTIETH-CENTURY URBANISM: FOUR URBAN THINKERS AND THE CITY THEY ENVISIONED

This seminar is designed as a hypothetical debate among four influential thinkers whose differing conceptions of the twentieth-century city were shaped by their response to New York City's urban and architectural development: Lewis Mumford (1895–1990), Robert Moses (1888–1981), Jane Jacobs (1916–2006), and Rem Koolhaas (1944–). We explore the central issues that preoccupied each, from civic representation and environmental sustainability to large-scale infrastructure and urban renewal, from community and complexity to architecture's role in the urban imaginary. New York has been called the capital of the twentieth century. The focus of the seminar is twofold: on the contribution of the "urban intellectual" to the production of culture; and on modern New York's physical and architectural history. More broadly, the seminar aims to reflect on the future of New York and of cities in general by reassessing the ideas and legacy of this quartet of visionary thinkers. Supplementing our discussions of key texts by and about Mumford, Moses, Jacobs, and Koolhaas is much other relevant historical and theoretical material.

requirements: two in-class case-study presentations (12 minutes each); a thematically related term paper (15 pages).

ARCH 483.28 GRADUATE SEMINAR IN URBAN STUDIES

Daisy Ames, Ife Salema Venable

Tuesday 10-11:50AM

Room 712F

2 credits

HOUSINGS: UNAUTHORIZED EPISTEMOLOGIES

"Housing" conjures a range of signifiers both material and nonmaterial, and is a term implicated in a wide matrix of assumptions at once aesthetic, architectural, political, cultural, and moral. Understood as houses or apartments considered collectively, as a form of enclosure that works physically, "housing" also works conceptually in a range of formats, systems, and structures that have historically and will continue to partition knowledge. As such, a drawing or map is a type of "housing," a thing, a protective enclosure that "houses" particular ideas about space, boundary, and adjacency with its own politics and aesthetics that do work to systematically protect and maintain certain hierarchies. "Housings: Unauthorized Epistemologies" examines how knowledge of territories referred to as "urban" or "metropolitan" and especially how a fundamental constituent of these territories—"housing"—is acquired, codified, stored, represented, troubled, and reimagined. Through research and the development of uncommon representations of urban housing projects located across New York City's five boroughs, we will interrogate typology, challenge, and unsettle official views. Considering modes of being and dwelling performed outside of various permissions and modes of experience beyond sight, this course will mine the affective and atmospheric qualities of the urban home at various scales of domesticity, figuring, for example, how to map how air and heat circulates or the various failures, ruptures, breaks or forms of "misuse" that accompany living-in. Working at the intersections of architecture, infrastructure, and utility, we will closely read and carefully analyze the methods by which air, water, waste, energy, and labor circulate, are designed, distributed, serviced, maintained, and represented. Hybrid and layered descriptive strategies will be collaboratively cultivated to expose existing, potential, latent, and foundational entanglements that exist across social, political, economic, environmental, and constructed lines of racial difference. At once revelatory, students will also speculate about what has been and might be gained by going unseen, being "unmapped" or "non-mapped." Engaging the discourse of fugitivity, we will probe how sites of resistance and refusal are bound and ask what are the spatial, aesthetic, and political implications of both representation and erasure? These experiments in researching, reading, drawing, and writing on and about urban geographies of housing will constitute an experimental, pluralist, and relational praxis or method, cultivating unauthorized epistemologies.

ARCH 485.32 GRADUATE SEMINAR IN THEORY, HISTORY, CRITICISM

Linda Pollak

Friday 10-11:50AM

Room 712F

2 credits

CONSTRUCTING GROUND SEMINAR

In his 1974 book, *The Production of Space*, the philosopher Henri Lefebvre defined social space as the "encounter, assembly, [and] simultaneity ... of everything that is produced by nature or by society, either through their cooperation or through their conflicts." The objective of the seminar is to inspire and support students in architecture to integrate landscape thinking and design into their own creative practice. The framework of "constructing ground" enables inclusion of living systems in research and design without segregating them within an exclusive domain of "nature." The idea of constructed ground registers the fact that the ground of any site is always already constructed, and, therefore, not background or origin or *tabula rasa*. The seminar will reveal and reflect upon projects and processes integrating landscape through a range of perspectives. We will explore works by architects, artists and landscape architects; landscape representation; inside outside, landscape as agent of urban regeneration, and play.

LANDSCAPES

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During the first half of the seminar, each student will present her/his analysis/interpretation of three works of landscape-- one by an architect, one by an artist, and one by a landscape architect. Each presentation should begin with an outline, and include the following: a plan (with scale and north arrow) and other drawings; a drawing diagram by the presenter; photographs, annotated and captioned; quote(s) of writing by the designer.
READINGS

Each student is responsible for reading and discussion. Readings (available on Google Drive) include essays by Michael Corajoud, James Corner, Rosalind Krauss, Liane Lefaivre and Linda Pollak. Supplementary readings will be available as desired.

STUDIO CLASS

In this class, each student will present a drawing or model about "landscape" in the project s/he is working on in studio, as basis for discussion.

JOURNAL JOURNEY

Each seminar participant will keep a Landscape Journal—a physical notebook—in which s/he records notes, sketches, observations, and questions. The journal will respond to each class session, as well as preparation for presentations and discussions. Objectives of the journal are to enable exploration, enhance reflection, and promote critical thought. Students will be asked to submit journals periodically for review. At the end of the semester, students will share their journals, in support of review and reflection on the seminar.

ATTENDANCE

Attendance is fundamental to the workings of the seminar, and therefore mandatory. Any person's lateness or absence affects the entire group. Students are expected to attend all class meetings and to arrive at or before 10:00 am.

GRADING: Attendance mandatory, Participation 25%, Presentation 25%, Reading 25%, Journal 25%.

ARCH 485.52 GRADUATE SEMINAR IN THEORY, HISTORY, CRITICISM

Nora Akawi

Friday 3-4:50PM

Room 712F

2 credits

BORDERLANDS AND EXTERRITORIES: ISLANDS

Part of the *Borderlands and Exterritories* seminar series, this class will focus on islands. The seminar offers students the tools to critically consider notions of territoriality, sovereignty, and bordering, particularly as they relate to architecture. We take as a starting point, and problematize our understanding of territoriality as it is still heavily rooted in our imagination of the world as divided into compartmentalized, distinct, and mutually exclusive political formations. We understand movements across borders (recognized or unrecognized, regular or irregular) not only in their relationship to movements for social justice and liberation, but also as the central elements that define contemporary territories, and defy the static status-quo of the nation-state. Through an interdisciplinary selection of readings, students will be introduced to key concepts including cosmopolitanism, citizenship, and rights. We'll critically study and analyze processes of bordering as they exist both in nationalism and humanitarianism, as well as their material manifestations. We will develop the conceptual tools to understand the entanglements of architecture with processes of division across scales and geographies (from the planetary, to settler-colonial states, and to urban segregation). We will thoroughly and comparatively study a wide range of island conditions: from geographically separated terrains, to enclaves and encampments, all the way to autonomous regions and sanctuary spaces. This seminar is interested not only in the technologies and architectures of violent enclosure and segregation, but also the actions that refuse them, or traverse them. Learning on the study of key conceptual and theoretical frameworks and reading discussions, students develop illustrated research essays around an Island condition (in the scale, geography, and format of their choice), considering Arjun Appadurai's proposal to shift the emphasis from 'trait geographies' to 'process geographies': "in other words, on the forms of movement, encounter, and exchange that confound the idea of bounded world-regions with immutable traits" (Appadurai, 2001). The hope is that through critical analysis and representation (drawing, mapping, and other visualizations), not of static conditions, but rather of processes both of building and dismantling borders, other imaginaries for shared terrains can emerge.

ARCH 485.53 GRADUATE SEMINAR IN THEORY, HISTORY, CRITICISM

Eva Franch i Gilabert

Thursday 12-1:50PM

Room 712F/online

2 credits

URGENT FUTURES: POTENTIAL PEDAGOGIES

All schools of architecture today have the opportunity and the responsibility to articulate what our discipline can contribute to the world we live in, and to redefine what the education of an architect both can and should be. This design seminar invites participants to reflect on the fundamental aspects of architectural education, critically dismantle prevalent pedagogical models, and propose new referents for the social, political, technological and material agency that architects have in affecting the designed environment. From the History and Theory curriculum to the Design Studio passing by Professional Practice – this course invites us to reflect and produce potential pedagogies that embody new design methods and forms of speculation about the near and urgent future. Through weekly guest presentations of historical counter-narratives, contemporary practices and successful and unsuccessful pedagogical projects, participants will be in charge of designing a syllabus, a student manual, and a visionary curriculum that introduces new agendas, methods and institutional structures for architecture education and practice.

Eva Franch i Gilabert is an architect. Franch's work articulates global desires with local understandings with an interest in new architecture histories and potential futures. Franch specializes in curatorial activism and planetary pedagogies and practices. Since 2018, Franch has held the position of Distinguished Professor at the Shanghai Academy of Fine Art. Former Director of the Architectural Association School of Architecture in London, between 2010-2018, Franch was Chief Curator and Executive Director of Storefront for Art and Architecture in New York and co-curated the US Pavilion at the 2014 Venice Architecture Biennale. Franch is a licensed and registered architect in Spain since 2003. In

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2004 she founded OAAA (Office of Architectural Affairs). Franch has directed the Thesis Studios at The Cooper Union and Rice University School of Architecture and taught seminars and design studios at Columbia University GSAPP, the IUAV University of Venice, SUNY Buffalo, and Rice University School of Architecture. Franch has received the Reyner Banham Fellowship, the Wortham Fellowship, the La Caixa Fellowship, a Schloss Solitude Fellowship and grants from the National Endowment for the Arts, the Graham Foundation and the US State Department. She has received numerous awards and her work has been exhibited internationally including the Venice Architecture Biennale, FAD Barcelona, and the Shenzhen Biennale of Architecture and Urbanism, among others. Franch has curated international projects including **OUT**, the 2014 Arquia Proxima biennial competition, and **Borders**, the 2011 Think Space biennial concept competition programme.

ARCH 499 ARCHITECTURE INDEPENDENT STUDY

Faculty TBD

Schedule TBD

Room TBD

2 credits

OBJECTIVE: The purpose of this Independent Study is to allow students to pursue an independent study or research project outside their regular coursework, in order to delve more deeply into a specific topic of interest. An independent study may be taken under the supervision of a member of the resident faculty (defined as full-time or proportional-time faculty members) or adjunct faculty members who have taught at the School of Architecture for at least 6 semesters. The faculty member -- who becomes the advisor for the independent course -- must approve the proposed study and agree to provide continuing supervision of the work.

ELIGIBILITY: Only graduate students in good academic standing (defined as having earned a minimum 3.25 G.P.A. overall for the previous semester are eligible for independent study (which means that graduate students become eligible for Independent Study starting in their second semester of study). Independent study may be taken only once during a semester in an advanced subject for two (2) credits. One (1) credit of independent study represents a minimum of three (3) hours of work during each week of a 15-week semester.

APPLICATION PROCEDURE: The major consideration in approving proposals for independent study is the educational value of the study project within the structure of the degree requirements as well as the student having successfully completed any relevant introductory coursework in the topic proposed. Before applying for an independent study, eligible students should contact the faculty they wish to consider as an advisor to discuss their proposal.

1. The selected faculty advisor must be teaching in the School of Architecture during the semester in which you wish to enroll (a professor on leave may not supervise an independent study).
2. The student writes a one-page proposal for the course including a concise description, deliverables, workplan, schedule and preliminary bibliography and describe previous coursework in the proposed topic as well as the educational value of the selected topic of interest.
3. The student selects a faculty adviser who must sign off on the proposal
4. The student submits the signed proposal to the Dean for review in consultation with the faculty member.
5. Approval of the Independent Study based on merits of proposal and availability of funds to compensate faculty member in compliance with CUFCT/CUOP contract.
6. Once approved, student will receive permission to register for ARCH 499.