

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
First Year Schedule
Fall 2021

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9AM	Freshman Seminar HSS1 Section B,D 9-9:50AM see Hum sched Representation I ARCH 117A Davis Cortes Yessios 10AM-1:50PM Rm 630C 3 credits	Freshman Seminar HSS1 Section G 9-11:50AM see Hum sched 3 credits Freshman Seminar HSS1 Section B 10-11:50AM see Hum sched 3 credits Freshman Seminar HSS1 Section H 11-11:50AM see Hum sched 3 credits	Freshman Seminar HSS1 Section H 11AM-12:50PM see Hum sched Freshman Seminar HSS1 Section M 11-11:50AM see Hum sched Freshman Seminar HSS1 Section L 12-12:50PM see Hum sched 3 credits	Freshman Seminar HSS1 Section D 9-10:50AM see Hum sched 3 credits	Freshman Seminar HSS1 Section M 10-11:50AM see Hum sched 3 credits
2PM	Hist Arch I ARCH 115A Vidler 3-5:50PM Rm 315F 3 credits	Architectonics ARCH 111A Baab Espinosa Veledar 2-5:50PM Rm 330F 4 credits	Calculus ARCH 103 Trusewych 2-4:50PM Rm 503CS*** 3 credits ***Room located in 41 Cooper Square	Architectonics ARCH 111A Baab Espinosa Veledar 2-5:50PM Rm 330F	Shop Tech FA 100RA Cetera Leonard/Hutchings Monasteria/Russakis Smith 1-2:50PM Rm 430F 1 credit

The following sections of THE FRESHMAN SEMINAR do not fit into the First-Year Schedule:

- HSS1 Section A M 9-11:50 (conflicts with ARCH 117A)
- HSS1 Section C M 10-11:50, W 11-11:50 (conflicts with ARCH 117A)
- HSS1 Section E M 10-11:50, W 11-11:50 (conflicts with ARCH 117A)
- HSS1 Section F M 10-11:50, W 11-11:50 (conflicts with ARCH 117A)
- HSS1 Section I T 3-3:50, F 12-1:50 (conflicts with ARCH 111A, FA 100RA)
- HSS1 Section J T 4-4:50, F 4-5:50 (conflicts with ARCH 111A)
- HSS1 Section K W 2-2:50, Th 2-3:50 (conflicts with ARCH 103, ARCH 111A)
- HSS1 Section N W 12-12:50, F 12-1:50PM (conflicts with FA 100RA)

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Second Year Schedule
Fall 2021

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9AM		Mod Society HSS3 Section C 9-10:50AM see Hum sched 3 credits		Representation III ARCH 127A Attali Waxman 10AM-12:50PM Rm 315F/online 3 credits	Hist Arch II ARCH 125A Choi 10AM-12:50PM Rm 315F 3 credits
	Mod Society HSS3 Lecture1 12-12:50PM see Hum sched		Structures I ARCH 122A O'Donnell 11AM-12:50PM Rm 315F 2 credits		
	Environments ARCH 124A Kallipoliti				
2PM	1-2:50PM Rm 315F 2 credits	Design II ARCH 121A Javidi Palacio Thomas 2-5:50PM Rm 330F 5 credits	Design II ARCH 121A Javidi Palacio Thomas 2-5:50PM Rm 330F	Design II ARCH 121A Javidi Palacio Thomas 2-5:50PM Rm 330F	Mod Society HSS3 Section K,L 2-3:50PM see Hum sched 3 credits
	Mod Society HSS3 Section B,J 3-4:50AM see Hum sched 3 credits				

The following sections of THE MODERN CONTEXT do not fit into the Second-Year Schedule:

- HSS3 Section A M 1-2:50 (conflicts with ARCH 124A)
- HSS3 Section D M 2-3:50, (conflicts with ARCH 124A)
- HSS3 Section E T 2-3:50 (conflicts with ARCH 121A)
- HSS3 Section F W 10-11:50 (conflicts with ARCH 122A)
- HSS3 Section G W 11-12:50 (conflicts with ARCH 122A)
- HSS3 Section I Th 1-2:50 (conflicts with ARCH 121A)

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
 Third Year Schedule
 Fall 2021

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

Bldg Tech
 ARCH 135A
 Anderson
 11AM-12:50PM
 Rm 215F
 2 credits

2PM Structures II
 ARCH 132A
 Helbig
 Meier
 2-4:50PM
 online
 2 credits

Design III
 ARCH 131A
 Iturbe
 Ames
 Anderson
 Cabrera
 Helbig
 Lowder
 Meier
 2-5:50PM
 Rm 330F
 5 credits

Design III
 ARCH 131A
 Iturbe
 Ames
 Anderson
 Cabrera
 Helbig
 Lowder
 Meier
 2-5:50PM
 Rm 330F

Design III
 ARCH 131A
 Iturbe
 Ames
 Anderson
 Cabrera
 Helbig
 Lowder
 Meier
 2-5:50PM
 Rm 330F

EVT
 ARCH 134A
 Cabrera
 3-5:50PM
 Rm 315F
 3 credits

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
 Fourth Year Schedule
 Fall 2021

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

Structures III
 ARCH 142A
 Shi
 10AM-12:50PM
 Rm 315F
 2 credits

2PM

Constr Mgt
 ARCH 143A
 Maass
 6-6:50PM
 Rm 315F
 1 credit

Design IV
 ARCH 141A
 Agrest
 Bates
 Drake
 Fiore/Ramus
 2-5:50PM
 Rm 330F
 5 credits

Design IV
 ARCH 141A
 Agrest
 Bates
 Drake
 Fiore/Ramus
 2-5:50PM
 Rm 330F

Design IV
 ARCH 141A
 Agrest
 Bates
 Drake
 Fiore/Ramus
 2-5:50PM
 Rm 330F

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
 Fifth Year Schedule
 Fall 2021

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

Advanced Topics

ARCH 225.54
 Ames, Vanable
 10-11:50AM
 Rm 712F
 2 credits

Advanced Topics

ARCH 225.55
 Kallipoliti
 10-11:50AM
 Rm 712F
 2 credits

Advanced Topics

ARCH 225.57
 Franch
 12-1:50PM
 712F/online
 2 credits

Advanced Concepts

2PM

ARCH 205.05
 Ockman
 1-2:50PM
 Rm 712F/online
 2 credits

Thesis

ARCH 151A
 Akawi
 Aranda
 Eber
 2-5:50PM
 Rm 312F/313F
 6 credits

Thesis

ARCH 151A
 Akawi
 Aranda
 Eber
 2-5:50PM
 Rm 312F/313F

Thesis

ARCH 151A
 Akawi
 Aranda
 Eber
 2-5:50PM
 Rm 312F/313F

Advanced Topics

ARCH 225.56
 Akawi
 3-4:50PM
 Rm 712F
 2 credits

Prof Practice

ARCH 154A
 Samuelian
 5:00-7:20PM
 Rm 712F
 2 credits

Structures IV

ARCH 152
 Oppenheimer
 6-7:50PM
 Rm 315F
 2 credits

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
 Architecture Electives
 Fall 2021

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

Advanced Topics
 ARCH 225.54
 Ames, Venable
 10-11:50AM
 Rm 712F
 2 credits

Workshop
 ARCH 186.03
 Bokov
 10-10:50AM
 Rm 235F
 1 credit

Advanced Topics
 ARCH 225.55
 Kallipoliti
 10-11:50AM
 Rm 712F/online
 2 credits

Hist Arch II
 ARCH 125A
 Choi
 10AM-12:50PM
 Rm 315F
 3 credits

Advanced Concepts
 ARCH 205.05
 Ockman
 1-2:50PM
 Rm 712F/online
 2 credits

Crossings
 ARCH 185.18

2PM

Smith
 1-3:50PM
 Rm 215F
 2 credits

EVT Elective
 ARCH 194.03
 Ayub
 3-4:60PM
 712F/online
 2 credits

Hist Arch I
 ARCH 115A
 Vidler
 3-5:50PM
 Rm 315F
 3 credits

Workshop
 ARCH 186.02
 Palacio, Baglione,
 Tzavelis, Wooton
 11-11:50AM
 503CS***
 1 credit

Crossings
 ARCH 185.19
 Lokko
 12-1:50PM
 online
 2 credits

Advanced Topics
 ARCH 225.57
 Franch
 12-1:50PM
 712F/online
 2 credits

Landscape Arch
 ARCH 176.03
 Pollak
 10-11:50AM
 Rm 712F
 2 credits

Advanced Drawing
 ARCH 178
 Gussow
 10-11:50AM
 Rm 604F
 2 credits

Advanced Topics
 ARCH 225.56
 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 ELECTIVES**

<p>ARCH 115A HISTORY OF ARCHITECTURE I Anthony Vidler Monday 3-5:50PM</p>
<p>ARCH 125A HISTORY OF ARCHITECTURE II Esther Choi Friday 10AM-12:50PM</p>
<p>ARCH 176.03 LANDSCAPE ARCHITECTURE Linda Pollak Friday 10-11:50AM</p>
<p>ARCH 178 ADVANCED DRAWING SEMINAR Sue F. Gussow Friday 10-11:50AM</p>
<p>ARCH 185.18 CROSSINGS Austin Wade Smith Monday 1-3:50PM</p>
<p>ARCH 185.19 CROSSINGS NEW CLASS Mae-Ling Lokko Thursday 12-1:50PM</p>
<p>ARCH 186.02 WORKSHOP (ALSO VIP38X-SECTION B: SOLAR DECATHLON) NEW CLASS Julian Palacio (Architecture), Melody Baglione (MechE), Cosmas Tzavelis (CivE), David Wooton (MechE) Thursday 11-11:50AM + 1 office hour TBD</p>
<p>ARCH 186.03 WORKSHOP NEW CLASS Anna Bokov Thursday 10-10:50AM</p>
<p>ARCH 194.03 EVT ELECTIVE NEW CLASS Zulaikha Ayub Monday 3-4:50PM</p>
<p>ARCH 199 ARCHITECTURE INDEPENDENT STUDY NEW CLASS TBD TBD</p>
<p>ARCH 205.05 ADVANCED CONCEPTS NEW SCHEDULE Joan Ockman Monday 1-2:50PM</p>
<p>ARCH 225.54 ADVANCED TOPICS Daisy Ames, Ife Salema Vanable Tuesday 10-11:50AM</p>
<p>ARCH 225.55 ADVANCED TOPICS Lydia Kallipoliti Thursday 10-11:50AM</p>
<p>ARCH 225.56 ADVANCED TOPICS Nora Akawi Friday 3-4:50PM</p>
<p>ARCH 225.57 ADVANCED TOPICS NEW CLASS Eva Franch Thursday 12-1:50PM</p>
<p>*****OTHER ELECTIVES IN WHICH ARCH ENROLLMENT IS ENCOURAGED*****</p>
<p>EID 116 MUSICAL INSTRUMENT DESIGN Daniel Fishkin Friday 1-3:50PM</p>
<p>FA 327 COMPUTATIONAL STUDIO Brad Samuels/ João Enxuto Monday 7-9:50 + weekly 1-hour digital workshops</p>
<p>SE 403A INTRADISCIPLINARY SEMINAR Leslie Hewitt, Omar Berrada Tuesday 7-9:50PM</p>

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Fall 2021 Elective Course Descriptions

ARCH 115A HISTORY OF ARCHITECTURE I

Anthony Vidler
Monday 3-5:50PM
Room 315F
3 credits

AN INTRODUCTION TO ARCHITECTURE IN HISTORY AND THEORY

An introduction to the history of architectural practice and theory, with emphasis on the traditions established in building cultures from antiquity to the present as transformed by social and technological changes. Themes will include: the development of hierarchies of religious, domestic, and public space; monumental religious and secular construction; pre-industrial technologies of building; the influence of natural resources on settlements and building methods; the social, cultural, and political interpretation of architecture and urbanism. The course will consider questions of historical analysis, including periodization, knowledge drawn from other disciplines (technology, sociology, anthropology, archeology, geography, ecology), and the construction of analytical models, virtual and analog. As the first in the sequence of history and theory courses in the School of Architecture, the course will examine methods of research, interpretation, and explore the continuing role of history and historical precedent in design practices. Students will select specific a specific case study tied directly to their sense of commitment to architecture and urbanism.

Required of all Architecture students. Open to Art and Engineering students as an elective.

ARCH 125A HISTORY OF ARCHITECTURE II

Esther Choi
Friday 10AM-12:50PM
Room 315F
3 credits

Histories of architecture are like allegories or parables that highlight the central problems of world-making: the creation of centers and peripheries; tactics of imperial and colonial rule; the uses and abuses of concepts of nature; unquestioned beliefs in modernization; and the drive to standardize, classify, unify, universalize, and dominate. Organized by central themes, this course explores key ideas and processes related to the construction of "modernity", from roughly 1750 to 1950, across generations and geographies. Throughout this semester, we will examine how ideas and processes related to modernity, modernism, and modernization took shape in different contexts, and how architecture—and spatial production, more generally—operated as both a symptom of and catalyst for significant social, political, technological, economic, and environmental shifts.

Pre-requisite: ARCH 115. Required of all Architecture students. Open to Art and Engineering students as an elective.

ARCH 176.03 LANDSCAPE ARCHITECTURE

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: 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%.

Open to all students. Maximum enrollment of 15 students.

ARCH 178 ADVANCED DRAWING SEMINAR

Sue F. Gussow
Friday 10-11:50AM
Room 604F
2 credits

The basis of this course is a dialog between figuration and abstraction. Students are expected to elaborate a group of drawings generated from personal experience or observation. Within this framework, it would be difficult to avoid reflecting on and processing the ravages of the Covid pandemic; its effect on us as individuals and citizens of this globe. Simultaneously we are becoming painfully aware of this nation's shameful history and ongoing practice of profound systemic racism, economic oppression and deep political division. It would be an overreach to imagine that our drawings could take on the whole spectrum of these many cruel months. The hope is that through the process of drawing we might explore/filter how we are to live in and survive this fearful time, how we might explain it to ourselves and to one another. Each student will plan and develop a series of drawings generated from individually chosen themes. Weekly seminars meet to critique work in progress and discuss issues relevant to the discipline of drawing. Students are encouraged to investigate a broad spectrum of imagery and materials. Open to all students with permission of the instructor. Maximum enrollment of 15 students.

ARCH 185.18 CROSSINGS

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 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. Open to all students with permission of the instructor, austin.smith@cooper.edu. Maximum enrollment of 15 students.

ARCH 185.19 CROSSINGS

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. Open to all students. Maximum enrollment of 15 students.

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 from 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.

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ARCH 186.02 WORKSHOP (ALSO VIP38X1-SECTION B: SOLAR DECATHLON)

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) undergraduate 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/>

Open to all students.

ARCH 186.03 WORKSHOP

Anna Bokov

Wednesday 10-10:50AM

Room 235F (School of Architecture Archive)

2 credits

INSTRUMENTS OF MEASURE

The workshop will focus on constructing instruments for measuring perception, produced in the Psychotechnical Laboratory at Vkhutemas in the 1920s. The instruments measured the aptitude for spatial assessment, which was deemed essential to future architects. They ranged from a simple device testing the subject's ability to divide a line into specific increments to an apparatus for assessing spatial depth relative to an incline. The evaluation system developed in the laboratory not only tested the students but also claimed to provide the evidence for deriving universal principles of spatial form. The Workshop is held in preparation for the exhibition on Vkhutemas planned at Cooper Union's Arthur A. Houghton Jr. Gallery, scheduled for Spring 2022. It builds on the research and analysis that was started in the seminar held in Spring 2021 and will concentrate on the detailing and materiality of the instruments. The goal of the Workshop is not only to reconstruct these historical artifacts but to produce functional instruments that could be engaged by exhibition visitors. The resultant physical reconstructions will be displayed in the exhibition, with proper credit and exposure given to each collaborator as part of the exhibition and accompanying press materials.

Open to all students. Maximum enrollment of 15 students.

ARCH 194.03 EVT ELECTIVE

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).

Open to all students with permission of the instructor. Maximum enrollment of 15 students.

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 theLoPh 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

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

ARCH 199 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 students in fourth and fifth years 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. 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 199.

ARCH 205.05 ADVANCED CONCEPTS

Joan Ockman

Monday 1-2:50PM

Room online/712F

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).

Required for Architecture students. Open to Art and Engineering students with permission of the instructor. Maximum enrollment of 15 students.

ARCH 225.54 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

Daisy Ames, Ife Salema Vanable

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.

Prerequisites: ARCH 115 A-B, ARCH 125 A-B and ARCH 175 or permission of the instructor. Required for Architecture students. Open to Art and Engineering students as elective. Maximum enrollment of 15 students.

ARCH 225.55 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

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.

Prerequisites: ARCH 115 A-B, ARCH 125 A-B and ARCH 175 or permission of the instructor. Required for Architecture students. Open to Art and Engineering students as elective. Maximum enrollment of 15 students.

ARCH 225.56 ADVANCED TOPICS IN HISTORY, THEORY, 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. Leaning on the study of key conceptual and theoretical frameworks and reading discussions, students develop illustrated research essays around '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,

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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.

Prerequisites: ARCH 115 A-B, ARCH 125 A-B and ARCH 175 or permission of the instructor. Required for Architecture students. Open to Art and Engineering students as elective. Maximum enrollment of 15 students.

ARCH 225.57 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

Eva Franch i Gilabert

Thursday 12-1:50PM

Room 712F

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. Prerequisites: ARCH 115 A-B, ARCH 125 A-B and ARCH 175 or permission of the instructor. Required for Architecture students. Open to Art and Engineering students as elective. Maximum enrollment of 15 students.

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 2004 she founded OOAA (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.

EID 116 MUSICAL INSTRUMENT DESIGN

Daniel Fishkin
Friday 1-3:50PM
Room 506CS
3 credits

Theory and use of musical scales, including just intonation and equal temperament systems. Musical harmony and basic ear training. Human hearing and the subjective measures of sound: pitch, loudness and timbre. Acoustic analysis of design and operating principles of traditional instruments, including members of the percussion, string and wind families. Prototyping and testing of original musical instrument concepts.

Open to all students with permission of the instructor.

Daniel Fishkin, composer, sound artist, and instrument builder. Daniel studied with composer Maryanne Amacher and with multi-instrumentalist Mark Stewart. He has performed as a soloist on modular synthesizer with the American Symphony Orchestra, developed sound installations in abandoned concert halls, and played innumerable basement punk shows. Daniel's lifework investigating the aesthetics of hearing damage has received international press (Nature Journal, 2014); as an ally in the search for a cure, he has been awarded the title of "tinnitus ambassador" by the Deutsche Tinnitus-Stiftung. He is the only luthier that studied with the daxophone's inventor, Hans Reichel; Daniel's instruments have traveled the world, and are played everyday by players based in Canada, California, Norway, Germany, France, Japan, Kazakhstan, Australia, and the USA. <http://dfiction.com/> Contact daniel.fiction@gmail.com for more information and permission to register.

FA 327 COMPUTATIONAL STUDIO

Samuels/Enxuto
Monday 7-9:50 + weekly 1-hour digital workshops
3 credits
Rm 215F/414F

The class will be focused on suppression of dissent and the ways in which technology, advocacy and law converge to create new methods to combat abuses of power as well as create pathways for justice and accountability. We will be studying protest movements and the role artists and architects play in rendering visible the relationship between cities, law enforcement and excessive use of force. The discussion of the class will be global, studying the effects of state sponsored violence against civilians and protesters around the world (including examples in Ukraine, Nicaragua, Iraq and Sudan, among others), but specific focus will be paid to protest, policing and excessive use of force in the United States. We will examine how the proliferation of citizen video has changed the documentation of protests and police violence and we will explore the use of 2d and 3d tools, originally developed for the gaming industry, that have now been appropriated for use in court to visualize and analyze spaces of public assembly as powerful forms of evidence. The class will include guest speakers from across the disciplines of law, human rights practice, art, advocacy and activism.

Open spots specifically for Architecture students. Fifth-year Arch registration welcome. Apparent overlap with ARCH 154 Prof Practice, not a problem.

Brad Samuels, B.Arch 2005, founding partner, leads SITU's research division and advises on schematic design and design development for SITU Studio projects. Recent work includes the Gotham Amenity Terrace for Tishman Speyer, the reconfigurable workspace for a large New York tech office, as well as a number of research projects with clients ranging from the International Criminal Court to the Brooklyn Public Library. Brad sits on the board of The Architectural League of New York and teaches in the undergraduate program at Barnard and Columbia College's joint Architecture Department. He holds a Bachelor of Arts from Vassar College in Art History and a Bachelor of Architecture from The Cooper Union.

João Enxuto, Academic Support Technician: Media Lab, Art Adjunct Instructor, has collaborated with the artist Erica Love since 2009 on projects about the political and economic dimensions of labor, institutions, and creative technologies. He was a fellow at the Whitney Museum Independent Study Program for 2012-2013 and will be a fellow at the Sommerakademie Paul Klee in Bern, Switzerland for 2019-2020. He has presented work and exhibited at the Centre Pompidou, Whitney Museum, the New Museum, Anthology Film Archives, Walker Art Center, Pratt Institute, Yossi Milo Gallery, Carriage Trade, Louisiana Museum in Denmark, ArtCenter/South Florida, and the Tamayo Museum in Mexico City. His writing has appeared in Art in America, Mousse Magazine, Walker Artist Op-Eds, Wired Magazine, X-TRA Contemporary Art Quarterly. He was awarded a New York Foundation for the Arts (NYFA) Artist Fellowship and a Creative Capital Andy Warhol Foundation Arts Writers Grant in 2017.

SE 403A INTRA-DISCIPLINARY SEMINAR

Leslie Hewitt, Omar Berrada
Tuesday 7-9:50PM
Rose Auditorium
2 credits

This course is a hybrid between a lecture series and discussion seminar. It is intended to provide a stimulating and rigorous forum between students' artistic concerns and those of twelve visiting speakers in a public lecture series of the School of Art. Class discussions will center on diverse presentations by artists, theorists, activists, designers, writers, curators, gallerists and other practitioners involved in the arts from positions that embody an interdisciplinary approach or that imply new uses for disciplinary traditions. Accordingly, the course is designed to introduce students to some of the debates currently driving contemporary art and the larger social context it embodies. Members of the class are expected to be active participants and will therefore be asked to respond with some intellectual invention to a variety of topics with weekly discussions, readings, and written or oral presentations.

Open to all students with permission of the Art Advising Office.