

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
First Year Schedule
Spring 2023

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9AM	Freshman Seminar HSS2 Section K 9-9:50AM see HSS schedule Freshman Seminar HSS2 Section A,F 9-10:50AM see HSS schedule Freshman Seminar HSS2 Section G,I 10-10:50AM see HSS schedule Freshman Seminar HSS2 Section E,J,L 11-11:50AM see HSS schedule 3 credits Freshman Seminar HSS2 Section B,D 11AM-12:50PM see HSS schedule 3 creduts Freshman Seminar HSS2 Section H,M 12-12:50PM see HSS schedule 3 credits		Physics ARCH 106 Kreis 10AM-12:50PM Rm 207AP### 3 credits	Freshman Seminar HSS2 Section A,F 9-9:50AM see HSS schedule 3 credits Freshman Seminar HSS2 Section G,I,K 9-10:50AM see HSS schedule 3 credits Freshman Seminar HSS2 Section B 10-10:50AM see HSS schedule Freshman Seminar HSS2 Section E,N 10-11:50AM see HSS schedule Freshman Seminar HSS2 Section H,J,L,M 11AM-12:50PM see HSS schedule Freshman Seminar HSS2 Section C,D 12-12:50PM see HSS schedule	
2PM	Hist Arch I ARCH 1115B Pandit 3-5:50PM Rm 315F 3 credits	Architectonics ARCH 111B Aranda Baab O'Donnell 2-5:50PM Rm 330F 4 credits Freshman Seminar HSS2 Section N 6-6:50PM see HSS schedule 3 credits Freshman Seminar HSS2 Section C 6-7:50PM see HSS schedule 3 credits	Representation II ARCH 117B Lowder 2-5:50PM Rm 215F/401CS*** 3 credits	Architectonics ARCH 111B Aranda Baab O'Donnell 2-5:50PM Rm 330F	Shop Tech FA 100RB Cetera Cohen Leonard/Hutchings Monasterio/Russakis 1-2:50PM Rm 430F(802CS) 1 credit ***Room located in 101 Astor Place

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Second Year Schedule
Spring 2023

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

Making Mod Society

HSS4
 Section C,F,H,J
 10AM-12:50PM
 see Hum sched
 3 credits

Structures I

ARCH 122B
 Palacio
 10-11:50AM
 Rm 315F
 2 credits

Representation IV

ARCH 127B
 Rowen
 10AM-12:50PM
 Rn 315F
 3 credits

Making Mod Society

HSS4
 Section G,K
 9-11:50AM
 see Hum sched
 3 credits

Hist Arch II

ARCH 125B
 Kogod
 10AM-1:50PM
 Rm 315F
 3 credits

Making Mod Society

HSS4
 Section B,D,I,M,N
 10AM-12:50PM
 see Hum sched
 3 credits

2PM

Environments

ARCH 124B
 Iturbe
 2-3:50PM
 Rm 201/201ACS***
 2 credits

Design II

ARCH 121B
 Iturbe
 Deiparine
 Lowder
 Zuliani
 2-5:50PM
 Rm 330F
 5 credits

Design II

ARCH 121B
 Iturbe
 Deiparine
 Lowder
 Zuliani
 2-5:50PM
 Rm 330F

Design II

ARCH 121B
 Iturbe
 Deiparine
 Lowder
 Zuliani
 2-5:50PM
 Rm 330F

Making Mod Society

HSS4
 Section A,E,L
 6-8:50PM
 see Hum sched
 3 credits

***Room located in
 41 Cooper Square

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Third Year Schedule
Spring 2023

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

Intro Urban Hist/Th

ARCH 133
Verma
11AM-12:50PM
Rm 205AP###
2 credits

Bldg Tech

ARCH 135B
Anderson
11AM-12:50PM
Rm 315F
2 credits

2PM

Structures II

ARCH 132B
Helbig
Meier
2-4:50PM
Rm 215F
2 credits

Design III

ARCH 131B
Ames
Tehrani
Veledar
2-5:50PM
Rm 330F
5 credits

Design III

ARCH 131B
Ames
Tehrani
Veledar
2-5:50PM
Rm 330F

Design III

ARCH 131B
Ames
Tehrani
Veledar
2-5:50PM
Rm 330F

EVT

ARCH 134B
Schaperkotter
Teitelbaum
2-4:50PM
Rm 315F
3 credits

###Room located in
101 Astor Place

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Fourth Year Schedule
Spring 2023

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

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

2PM

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

Design IV
ARCH 141B
Javidi
Reddy
Young
2-5:50PM
Rm 330F
5 credits

Design IV
ARCH 141B
Javidi
Reddy
Young
2-5:50PM
Rm 330F

Design IV
ARCH 141B
Javidi
Reddy
Young
2-5:50PM
Rm 330F

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Fifth Year Schedule
Spring 2023

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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9AM

Advanced Concepts

ARCH 205.20
Gersten
10-11:50AM
Rm 712F
2 credits

Advanced Topics

ARCH 225.67
Rowen
10-11:50AM
Rm 712F
2 credits

Advanced Topics

ARCH 225.41
Morrow
Wu
10-11:50AM
Rm 712F
2 credits

Advanced Topics

ARCH 225.68
Young
12-1:50PM
Rm 712F
2 credits

Advanced Topics

ARCH 225.59
Vidler

2PM

1-2:50PM
Rm 712F
2 credits

Thesis

ARCH 151B
Akawi
Kallipoliti
Speyer
2-5:50PM
Rm 312F,314F,330F
6 credits

Thesis

ARCH 151B
Akawi
Kallipoliti
Speyer
2-5:50PM
Rm 312F,314F,330F

Thesis

ARCH 151B
Akawi
Kallipoliti
Speyer
2-5:50PM
Rm 312F,314F,330F

Advanced Topics

ARCH 225.69
Ebo
3-4:50PM
Rm 712F
2 credits

Prof Practice

ARCH 154B
Pearson
Samuelian
5:00-7:20PM
Rm 104CS***
2 credits

***Room located in
41 Cooper Square

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
 Architecture Electives
 Spring 2023

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9AM			Advanced Concepts ARCH 205.20 Gersten 10-11:50AM Rm 712F 2 credits	Advanced Topics ARCH 225.67 Rowen 10-11:50AM Rm 712F 2 credits	Hist Arch II ARCH 125B Kogod 10AM-1:50PM Rm 315F 3 credits
	Advanced Topics ARCH 225.59 Vidler 1-2:50PM Rm 712F 2 credits		Adv Digital Arch ARCH 377.01 Cohen, Tyler 10AM-12:50PM Rm 400F(802CS***) 2 credits	Advanced Topics ARCH 225.68 Young 12-1:50PM Rm 712F 2 credits	Advanced Topics ARCH 225.41 Morrow, Wu 10-11:50AM Rm 712F 2 credits
	Advanced Topics ARCH 225.69		Engg Interdis EID 364 Aranda, Keene 10AM-12:50PM Rm 502CS 3 credits		Casting Tech TE 390-2 Wilhelm 10AM-1:50PM Rm 430F 2 credits
2PM	Ebo 3-4:50PM Rm 712F 2 credits		Solar Decathlon VIP 38XB Baglione, Cabrera, Palacio, Tzavelis, Wootton 12-12:50PM Rm LL210CS*** 1 credit	Engg Interdis EID 364 Keene 6-8:50PM Rm 105CS*** 3 credits	Feltman Seminar ARCH 185.03 Siegel 1-2:50PM Rm 712F 2 credits
	Hist Arch I ARCH 1115B Pandit 3-5:50PM Rm 315F 3 credits				***Room located in 41 Cooper Square

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
SPRING 2023 ELECTIVES

ARCH 185.03 CROSSINGS: THE FELTMAN SEMINAR Amie Siegel Friday 1-2:50PM
ARCH 186.05 WORKSHOP Pamela Cabrera, Julian Palacio TBD
ARCH 199 ARCHITECTURE INDEPENDENT STUDY TBD TBD
ARCH 205.20 ADVANCED CONCEPTS David Gersten Wednesday 10-11:50AM
ARCH 225.41 ADVANCED TOPICS Gina Morrow, Xiaoxiao Wu Friday 10-11:50AM
ARCH 225.59 ADVANCED TOPICS Anthony Vidler Monday 1-2:50PM
ARCH 225.67 ADVANCED TOPICS Jonah Rowen Thursday 10-11:50AM
ARCH 225.68 ADVANCED TOPICS Michael Young Thursday 12-1:50PM
ARCH 225.69 ADVANCED TOPICS Ifeoma Ebo Monday 3-4:50PM
ARCH 377.02 ADVANCED DIGITAL ARCHITECTURE Zach Cohen, Harrison Tyler Wednesday 10AM-12:50PM
<i>FYI, ARCHITECTURE ENROLLMENT ENCOURAGED AND WELCOME</i>
EID 116 MUSICAL INSTRUMENT DESIGN Cleek Schrey Friday 1-3:50PM
EID 364-1 GENERATIVE MACHINE LEARNING Ben Aranda, Sam Keene Wednesday 10AM-12:50PM
EID 364-2 DATA SCIENCE FOR SOCIAL GOOD Sam Keene Thursday 6-8:50PM
TE 390-2 CASTING TECH Andrew Wilhelm Friday 10AM-1:50PM
VIP 38XB VERTICALLY INTEGRATED PROJECTS Melody Baglione, Pamela Cabrera, Julian Palacio, Cosmas Tzavelis, David Wooton Wednesday 12-12:50PM

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION
Spring 2023 Elective Course Descriptions

ARCH 185.03 CROSSINGS: THE FELTMAN SEMINAR

Amie Siegel

Friday 1-2:50PM

Room 712F

2 credits

SCULPTURAL LIGHT: ART, MOVING IMAGE AND ARCHITECTURE

This course looks at video installation, the moving image and architecture—how artists have worked with light in the context of moving image practices that take their cues from the space, context or site of exhibition and display. From the sculptural use of light as a volume, to modifying 'available' light in existing structures towards the creation of a new work, the dimensional use of projected light in video and film installation, to the flatness of screens and their deployment as planar angles and dividers as well as porous surfaces, diaphanous atmospheres and virtual spaces—together we will take a critical and deconstructive perspective on how artists work with light as a physical and conceptual material, generating a deeper understanding of sculpture, media and architecture, but especially art. We will focus on aspects of color, saturation, transparency, shadow, reflection, opacity, duration and diffusion. Our group will ask questions concerning the difference between an "artwork" and an "intervention," and between individual or collaborative artistic practice and architectural practice. Course participants will view and visit works and projects by artists and architects, learning to break down and dissect their myriad artistic gestures and formal language. Together we will examine how an artwork is structured, and thus how meaning is generated through the experience of a work of art. No prior video, film or art historical knowledge is necessary. Open to all students as elective. Maximum enrollment of 12 students.

More information about Professor Siegel

Amie Siegel was born in Chicago, Illinois, in 1974; she lives and works in Brooklyn, New York. Siegel works variously with film, video, photography, sculpture, painting and installation. She is known for her layered, meticulously constructed works that trace and perform the undercurrents of systems of value, cultural ownership and image-making. Recent solo exhibitions include *Boundlines*, Scottish National Museum Gallery of Modern Art, Edinburgh (2022); *The Silence*, ArkDes, Stockholm (2022); *Medium Cool*, Blaffer Art Museum, Houston, TX (2019); *In Focus: Amie Siegel – Provenance*, Tate St. Ives, England (2018); *Winter*, Guggenheim Museum Bilbao, Spain (2017); *Strata*, South London Gallery, England (2017); *12x12: Amie Siegel*, Berlinische Galerie, Berlin, Germany (2017); *Interiors*, Frye Art Museum, Seattle, WA, USA (2017); *Quarry*, Audain Gallery, Simon Fraser University, Vancouver, Canada (2017); *Double Negative*, Museum Villa Stuck, Munich, Germany (2016); *Amie Siegel. Part 2: Ricochet*, Kunstmuseum Stuttgart, Germany (2016); *Imitation of Life*, Temple Bar Gallery, Dublin, Ireland (2016); *Provenance*, Museum für Angewandte Kunst, Vienna, Austria (2015); *The Architects*, Storefront for Art & Architecture, New York, USA (2015); *Provenance*, The Metropolitan Museum of Art, New York, USA (2014); *Black Moon*, Arthouse, Austin Museum of Art, Austin, TX, USA (2012); *Amie Siegel. Part 1: Black Moon*, Kunstmuseum Stuttgart, Germany (2011). Siegel has participated in numerous group exhibitions including at the Institute of Modern Art, Brisbane, Australia; CCS Bard Hessel Museum of Art, Annandale, NY; CAPC Musée d'Art Contemporain, Bordeaux, France; Centro Andaluz de Arte Contemporáneo, Seville, Spain; Museum of Contemporary Art, Manila, Philippines; Witte de With, Rotterdam, the Netherlands; Swiss Institute, NY; Vancouver Art Gallery, Canada; Haus der Kulturen der Welt, Berlin, Germany; Glucksman Gallery, Cork, Ireland; Dunedin Public Art Gallery, New Zealand; MAXXI Museo Nazionale della arti del XXI secolo, Rome, Italy; Cranbrook Art Museum, MI; Seattle Art Museum, WA; CCA Wattis, San Francisco, CA; Museum of Contemporary Art, San Diego, CA; Chapter, Cardiff, Wales; Institute for Contemporary Art, Boston, MA; Walker Art Center, Minneapolis, MN; MoMA/PS1, New York; Henry Art Gallery, Seattle, WA; MuMA, Melbourne, Australia; Hordalund Kunstsenter, Bergen, Norway; Centre d'Art Contemporain, Noisy-le-sec, France; Hayward Gallery, London, England; Leeds Art Gallery, England; Aspen Art Museum, CO; CA2M Centro de Arte 2 de Mayo, Madrid, Spain. Her work has been featured in the 34th São Paulo Bienal (2021) 12th Gwangju Biennial (2018); Dhaka Art Summit, Bangladesh (2018); Glasgow International, Scotland (2016); 5th Auckland Triennial, New Zealand (2013); and the Whitney Biennial (2008). Her films have screened at the Rotterdam International Film Festival (2019), Toronto International Film Festival (2014), Berlin International Film Festival (2014, 2006, 2003), Cannes International Film Festival (2011), and the New York Film Festival (2009). Together with artist Katarina Burin she curated the exhibition *Brute* at the Carpenter Center for Visual Arts, Harvard University, Cambridge, MA (2013). Amie Siegel has been a fellow of the DAAD Berliner-Künstlerprogramm and Guggenheim Foundation, a Fulton Fellow at The Film Study Center at Harvard University, and a Smithsonian Artist Fellow. She has been a recipient of awards from the Sundance Institute, Creative Capital, Anonymous Was A Woman and ICA Boston's Foster Prize. Siegel's work is held in public collections including The Museum of Modern Art, New York; Whitney Museum of American Art, New York; The Metropolitan Museum of Art, New York; Tate Modern, London; Kunstmuseum Stuttgart, Germany; Museum für Angewandte Kunst, Vienna, Austria; Auckland Art Gallery, New Zealand; The Carnegie Museum of Art, Pittsburgh, PA; and the Solomon R. Guggenheim Museum, New York.

ARCH 186.05 WORKSHOP

Pamela Cabrera, Julian Palacio

TBD

Room TBD

1 credit

SOLAR DECATHLON

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.

<https://cooper.edu/academics/vertically-integrated-projects/teams/solar-decathlon>

"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 Architecture students. Concurrent registration with VIP 38XB Vertically Integrated Project: Solar Decathlon.

More information about Professor Cabrera:

<https://cooper.edu/architecture/people/pamela-cabrera>

More information about Professor Palacio

<https://cooper.edu/architecture/people/julian-palacio>

ARCH 199 ARCHITECTURE INDEPENDENT STUDY

TBD

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 205.20 ADVANCED CONCEPTS

David Gersten

Wednesday 10-11:50AM

Room 712F

2 credits

NEW YORK CITY: A 5000 YEAR HISTORY

"New York City, a 5000 Year History" begins with the idea that New York City can be understood as a microcosm of world cultures, a living ecosystem of cultural diversity in a state of continuous transformation. With as many as 800 spoken languages, New York City is arguably the most linguistically diverse city on earth, containing a multitude of human, spatial, temporal, material, systemic and structural elements interacting in multiple time frames. This creates a living laboratory to explore and develop new questions that address the challenges of our increasingly complex world. Within this context of cultural diversity, New York City is understood as being constructed and transforming through the intersection of the Arts, Architecture, Engineering, and the Humanities, each with their long histories linked to and emerging from world cultures. With examples from over 5,000 years of art, architecture, engineering, science, technology, biology, finance, industry, politics, poetry, film, music, theater, religion and literature, the course is a close examination of New York City and the nature of transformation. Much of the discussions will focus on turning points or hinges in these histories. These include: the invention of the elevator, train, telegraph and water infrastructures, the invention of modern incorporations and modern banking, the Atlantic Slave Trade, Jim Crow, redlining, and mass incarceration, the carbon economy and the climate crises, the transformations of Yoruba polytheism in music, literature and the visual arts, the birth of the Greek theatre and the emergence of photography and film, the advent of 'the Nuclear'. From the Cave Drawings to the dawn of Blockchain, the conversations will explore many forms of knowledge, agency, action and transformation that create and move through New York City. Today, the world is facing significant crises, with billions of people at risk, we are in the midst of re-alignments and re-articulations of every aspect of our lives. There are people, communities, and institutions across all disciplines and across the globe that are increasingly confronted by the need for new models of asking the extraordinarily complex questions of our time. The need for social movements, for civic engagement, and exploratory works of empathy and ethics are as urgent as they have ever been. The very tangible potential to transform the lives of the most vulnerable creates an urgent call for spaces of communication and reciprocity where people can develop new understandings, perceptions and practices that respond to the scope of our challenges. The class will engage the United Nations Sustainable Development Goals (SDG's). These provide a shared framework of questions that is both specific in their challenges and offer a wide range of issues to be engaged. The class will include a collaborative research project focused on the linkages between New York City and the United Nations Sustainable Development Goals (SDGs), the disciplines of Arts, Architecture, Engineering, the Humanities and the students' personal experiences and interests. These projects will take many forms of manifestation. "New York City, a 5000 Year History" covers a large arc of content, asks questions of our city, our disciplines and our humanity, and searches for new modes of creating the transformations that embody our best hopes and aspirations.

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

More information about Professor Gersten

<https://cooper.edu/architecture/people/david-gersten>

ARCH 225.41 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

Gina Morrow, Xiaoxiao Wu

Friday 10-11:50AM

Room 712F

2 credits

Structural drawings have a distinct set of graphic conventions that show the way loads travel through a building from the roof to the ground, and how different structural materials (wood, concrete, and steel) resist these loads through their connections and framing strategies. The legibility of this technical language can reveal the clarity (or lack thereof) in the geometry and material systems of buildings. In this class we seek to explore the meanings and connotations that plan, elevation, and section take on in the discipline of structural engineering. We will study engineering concepts through the reading and making of structural drawings, proceeding thematically with primary structural systems and their accompanying drawing forms. Through a sequence of drawing and analysis exercises, students will work in groups to develop a structural design and set of drawings. In the second half of the semester a series of advanced, discrete topics will be introduced including structural detailing and material systems. Concurrent with the lectures on advanced topics, students will research the original drawings for a structure of their choosing and develop an interpretive drawing that describes a particular behavior or feature of the structural system discovered in the source material. Through this collective research we hope to probe the conventions and the history of structural drawings to better understand this form of technical language that plays a critical role in the design of buildings.

Required of all Architecture students. Pre-requisites: ARCH 115 History of Architecture I, ARCH 125 History of Architecture II. Open to Art and Engineering students with permission of the instructor. Maximum enrollment of 15 students.

More information about Professor Morrow

<https://cooper.edu/architecture/academics/people/gina-morrow>

More information about Professor Wu

<https://cooper.edu/architecture/academics/people/xiaoxiao-wu>

ARCH 225.59 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

Anthony Vidler

Monday 1-2:50PM

Room 712F

2 credits

ECOLOGY BEFORE AND AFTER ECOLOGY: NARRATIVES AND ENVIRONMENTAL VIOLENCE

Taking our cue from the title of Hippocrates' treatise on "Air, Waters, and Sites," we will examine a series of texts and environments from antiquity to the present, utopian, dystopian and nostalgic, that exemplify the ideality, but also the potential toxicity, of inhabitation. These texts, while not in the mainstream of "ecological" thought, nevertheless pose questions, develop narratives, and map environments that have been at risk since pre-history. Writing the environment, and reading its texts, will lead to the participants in the seminar to write their own maps of present environmental conditions, urban, rural and global.

Engagement: You have the responsibility to engage in class discussion, both during and following presentations – ask questions and don't hesitate to interrupt!

Readings: Each week you will come to class with one question based on the week's reading. You will send your question in a single sentence at least one day before the seminar. These questions will furnish the material for the discussion session in class and will represent 20% of the final grade.

Term Project: You will select an area of interest – a moment in history, an object or objects, a process in design, a site – for investigation through the term. This can change as your experience of architecture and its history changes, but should be based on your special interest in an aspect of architecture.

Final Presentation and Term Paper: You will craft a short presentation of your project to the class which you will then submit as a term paper.

Grading: Attendance: 10%; Weekly Questions and Class Participation: 20%; Mid-Term Presentation: (5 minutes) 15%; End of Term Presentation: (5-8 minutes) 25%; Term Paper: (10-15 pages plus illustrations) 30%

Required of all Architecture students. Pre-requisites: ARCH 115 History of Architecture I, ARCH 125 History of Architecture II. Open to Art and Engineering students with permission of the instructor. Maximum enrollment of 15 students.

More information about Professor Vidler

<https://cooper.edu/architecture/people/anthony-vidler>

ARCH 225.67 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

Jonah Rowen

Thursday 10-11:50AM

Room 712F

2 credits

CONSTRUCTION AND SLAVERY: THE ARCHITECTURE OF THE BLACK ATLANTIC



William Clark, "Planting the Sugar Cane," from Clark, Ten Views on the Island of Antigua (London, 1823)



William Clark, "Court House, Saint John's, Antigua," from Clark, Ten Views on the Island of Antigua (London, 1823)

Architecture requires labor. Black enslaved people worked to construct buildings for the entire period of Atlantic slavery. Enslaved builders contributed to producing every significant constructed environment of the Americas and the Caribbean during those territories' colonial eras and after. These range from governmental-administrative spaces and monuments down to agricultural facilities. They include White slaveholders' lavish dwellings, enslaved people's houses, and urban buildings. Enslaved workers dredged land to build Washington, D.C., and transformed barren landscapes into productive plantations. As skilled joiners, masons, and unskilled laborers, enslaved people constructed the landscapes of enslavement in Africa, the Americas, and Europe. They cut down trees for export to Europe as building materials in the triangular trade, and created wealth for absentee landowners to spend on building estates and mansions. This course will analyze such projects by asking who built them, where their construction materials came from, trace the sources of capital expended on those materials, and consider the land on which they are sited. Taking a comparative approach, this course will span in geography across four continents. We will consider traditional African construction techniques and their adaptations in the Americas, in addition to slave castles on the West African Coast. We will study labor camps, as well as enslaved people's urban dwellings in Latin America, the Caribbean, and North America. Comparing European enslavers' country houses to their counterparts on plantations in the Americas, we will chart the capital that financed such construction. Finally, we will turn to urban projects built by Black enslaved people, or for formerly enslaved people. How do we confront archival absences that omit the identities of the people who built these buildings? Where people appear only incidentally, can architecture's materiality provide alternative forms of evidence? Questions like these will prompt interdisciplinary inquiry across histories of race, economics, environments, and aesthetics.

Pre-requisites: ARCH 115 History of Architecture I, ARCH 125 History of Architecture II. Open to Art and Engineering students with permission of the instructor. Maximum enrollment of 15 students.

More information about Professor Rowen

<https://cooper.edu/architecture/people/jonah-rowen>

ARCH 225.68 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

Michael Young

Thursday 12-1:50PM

Room 712F

2 credits

1,2,3,4,5... (EPISTEMOLOGIES OF AESTHETICS)

This seminar will look at theoretical formats for aesthetic judgement, or in other words, how we make sense of our senses. The articulation of distinctions between different qualities in art and the environment requires the construction of aesthetic discourse; models for how attention, consciousness, knowledge, and sensation interrelate. There have been several different methods for evaluating appearances within human culture, some have been abandoned over time, but many still thrive in various manifestations. It is important as architects to understand not only how we are evaluating the aesthetics of our designs, but to also understand the lineage of different arguments and to follow how they relate to other cultural practices both in the past and in contemporary work. This seminar will explore five different structures for aesthetic judgement.

1. Those that compare appearances to a singular ideal – ex. beauty, truth, ...
2. Those that use a pairing of differences or negations – ex. sublime, ugly, ...
3. Those that structure judgment synthetically or in dialectical triads – ex. picturesque, uncanny, ...
4. Those that are found use a quad four-part structure – ex. melancholic, grotesque, ...
5. Those that work in serial comparisons of five or more – ex. interesting, zany, cute, ...

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION

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The seminar will be organized in roughly two-week modules around these five structures. Class sessions will consist of discussions of readings, artworks, films, media, architecture, and landscapes. Each student will be expected to participate in all discussions. The required work is a single page of writing and three questions for discussion every week.

Pre-requisites: ARCH 115 History of Architecture I, ARCH 125 History of Architecture II. Open to Art and Engineering students with permission of the instructor. Maximum enrollment of 15 students.

More information about Professor Young

<https://cooper.edu/architecture/people/michael-young>

ARCH 225.69 ADVANCED TOPICS IN HISTORY, THEORY, CRITICISM

Ifeoma Ebo

Monday 3-4:50PM

Room 712F

2 credits



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PRINCIPLES & PRAXIS OF DESIGN & SPATIAL JUSTICE

There is incredible diversity in the ways we experience and use spaces and places. However, historically the urban landscape has been used as a tool to establish inequitable power/social relationships resulting in an exclusive and disempowering spatial experience for some. As architects and designers, how can we ensure that we are creating equitable spaces and infrastructure that are inclusive to all? This seminar will explore various principles and practice of using design to address equitable access, and environments of safety and well-being particularly for communities of color. This work takes place through critical understandings of historical contexts, the development of new forms of knowledge and practice in our present, and speculating on future radical efforts of racial, social, and cultural reparation, through the process and outcomes of design. Students will be introduced to the practice of Design and Spatial Justice by building a shared foundation of anti-racist forms of communal knowledge and spatial practices, grounded in lived experiences. The course will begin with a collective understanding of the concept and principles of Design/Spatial Justice - its historical underpinnings rooted in an ideology of environmental justice and its connection to the history of injustice in the New York City built environment. In this seminar we will explore together some key questions: What are the physical manifestations of institutional racist practice and how have the urban landscapes of New York been shaped by them? How might we design for intersectionality and inclusion of communities of color? How might we better reckon with the past and manifest a future centered in a design /spatial justice praxis in the urban milieu?

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Throughout six themes, students will participate in weekly discussions, listen to guest lecturers and contribute reading reflections, module projects, and a final concept design or research project. Topics include design justice principles, community work and power building, infrastructure and neighborhood systems, the social and political dimensions of housing, environmental justice and spatial activism. Students will hear from various guest speakers with expertise in each module topic. Case studies in NYC will be analyzed physically, historically and metaphorically to uncover their contributions to or retractions from a Just New York City.

Pre-requisites: ARCH 115 History of Architecture I, ARCH 125 History of Architecture II. Open to Art and Engineering students with permission of the instructor. Maximum enrollment of 15 students.

More information about Professor Ebo

<https://cuadesign.com/>

ARCH 377.01 ADVANCED DIGITAL ARCHITECTURE

Zach Cohen, Harrison Tyler

Wednesday 10AM-12:50PM

Room 400F

2 credits

ROBOTIC FABRICATION I: THE ROBOTS ARE COMING

Popular technological trends like automation and artificial intelligence seem to forecast a future in which robots will take over every job, including those of creative practitioners. A complete robotic takeover is a long way off. But what has already begun is the indefinite transitional phase—in which we learn to live and work alongside automated counterparts. The transition to automation manifests in our very own School, in which a brand new lab provides students with access to fire-breathing automata that churn out ready-to-assemble kits of parts and buzzing multi-axis machines that materialize entire objects from nothing but a single plastic thread. The nature of creative work has changed. It is critical that we now not only collectively take stock of our new roles in creative processes, but also speculate on what the future of creative work—on what the future creator—looks like. As the late philosopher of science Kenneth A. Taylor writes in a posthumously published essay, entitled “The Robots are Coming” (and, so, playing on our tendency to apocalyptic predictions): “The most urgent question is what we humans would become in the process of substituting machine labor for human labor.” Will we be programmers? Troubleshooters? Repairpeople? Clerks? Tamers? Retirees? How will the introduction of robots into our creative practices augment both our creativity and the things we create? In this course, we will learn how robots work in order to learn how to design, think, and work with them. More specifically, we will unpack the material, mechanical, and computational parameters within these “black-boxed” automata and develop an instrumental understanding of their innerworkings. Further, we will critically situate robotic machines within contemporary discourses on labor and posthumanism. We will then strive to combine our nascent technical and theoretical knowledge to develop novel robotic fabrication methodologies (e.g., constructing, sculpting, depositing, etc.) and/or human-robot interaction workflows. The course will center on the use of the AACE Lab’s 6-axis robotic arm. Students will use the robotic arm to conduct both technical exercises and “material-thought experiments” that will help them to speculate on how this emergent tool can, or should, be used within their respective disciplines. The course will culminate in group research projects that realize this speculation.

Pre-requisites: Students should be comfortable working with CAD and CAM softwares and have experience working with a variety of machines in the AACE Lab – or permission of the instructors. If you are unsure if you have the right experience for this course, please reach out to either Zach, zach.cohen@cooper.edu, or Harrison, harrison.tyler@cooper.edu, to discuss.

Open to all students as elective. Maximum enrollment of 12 students.

More information about Professor Cohen

<https://cooper.edu/architecture/people/zach-cohen>

More information about Professor Tyler

<https://cooper.edu/academics/people/harrison-tyler>

TE 390-2 CASTING TECHNIQUES

Andrew Wilhelm

Friday 10AM-11:50PM

Room 430F

2 credits

Casting Techniques is a process intensive course covering the methods of translating a wax positive into bronze or other non-ferrous metals. All associated techniques from beginning a plaster or rubber mold to casting, chasing, finishing and patination of metal sculptures will be covered. Students will explore a variety of approaches to casting, as well as engage in discussions involving the history of bronze casting, and its place in contemporary art.

Open to elective-eligible B.Arch students. Maximum enrollment of 12 students.

More information about Professor Wilhelm

<https://cooper.edu/art/people/andrew-wilhelm>

FYI, ARCHITECTURE ENROLLMENT ENCOURAGED AND WELCOME

EID 116 ENGINEERING INTERDISCIPLINARY

Cleek Schrey
Friday 1-3:50PM
Room 104CS
3 credits

MUSICAL INSTRUMENT DESIGN

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 as elective.

More information about Professor Schrey

<https://music.princeton.edu/people/cleek-schrey/>

EID 364-1 ENGINEERING INTERDISCIPLINARY

Ben Aranda, Sam Keene
Wednesday 10AM-12:50PM
Room 502CS
3 credits

Generative Algorithms For Art & Architecture is part of an ongoing series of interdisciplinary seminars and studios exploring generative and machine learning approaches to art and architecture. Machine Learning refers to algorithms that learn and make predictions from large sources of data. Generative Algorithms refers to the use of a system, procedure or rules that "generate," or set into motion, a result with varying degrees of autonomy and discovery to the author. In this class, students are challenged to create multiple projects with generative and machine learning algorithms to explore the conceptual boundaries of their discipline. They do this within a collaborative framework of architecture, engineering and art students working together as a group. Fundamental to this kind of exploration is a constant questioning of the nature of authorship. In Machine Learning students analyze and output results from large datasets that act as the raw material in the so-called learning process; they steer the predictive results and frustrate conventional ideas of authorship. In generative algorithms, students craft their own projects with a degree of control and discovery that are specific to their concepts. How architects, engineers and artists speculate on these two related techniques for experimentation, and how these two approaches can yield visual, material and spatial results, is the focus of the class.

Open to Architecture students as elective with permission of instructors, benjamin.aranda@cooper.edu, sam.keene@cooper.edu.

More information about Professor Aranda

<https://cooper.edu/architecture/people/benjamin-aranda>

More information about Professor Keene

<https://cooper.edu/academics/people/sam-keene>

EID 364-2 ENGINEERING INTERDISCIPLINARY

Sam Keene
Thursday 6-8:50PM
Room 105CS
3 credits

DATA SCIENCE FOR SOCIAL GOOD

Applications of machine learning, data science and software engineering to projects in the areas of education, equality, justice, health, public safety, economic development or other areas. Projects will be done in collaboration with external partners, and will be focused on solving problems with an emphasis on the greater New York City Area. Students will work with the external partners to specify problems and investigate possible solutions. Students will work between disciplines to develop new machine learning based solutions and work collaboratively to visually convey the insights and results generated.

Open to Architecture students as elective with permission of instructor, sam.keene@cooper.edu.

More information about Professor Keene

<https://cooper.edu/academics/people/sam-keene>

VIP 38XB VERTICALLY INTEGRATED PROJECT: SOLAR DECATHLON

Melody Baglione (MechE), Pamela Cabrera (Architecture), Julian Palacio (Architecture), Cosmas Tzavelis (CivE), David Wooton (MechE)
Wednesday 12-12:50PM
Room LL210CS

1 credit

SOLAR DECATHLON

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. Concurrent registration with ARCH 186.05 Workshop for all Architecture students.

More information about Professor Baglione

<https://cooper.edu/academics/people/melody-baglione>

More about Professor Cabrera

<https://cooper.edu/architecture/people/pamela-cabrera>

More information about Professor Palacio

<https://cooper.edu/architecture/people/julian-palacio>

More information about Professor Tzavelis

<https://cooper.edu/academics/people/cosmas-tzavelis>

More information about Professor Wootton

<https://cooper.edu/academics/people/david-m-wootton>