

INTERIM PROGRESS REPORT FOR YEAR TWO

FOR THE NATIONAL ARCHITECTURAL ACCREDITATION BOARD

30 NOVEMBER 2018

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE
THE COOPER UNION FOR THE ADVANCEMENT OF SCIENCE AND ART

NADER TEHRANI, DEAN
ELIZABETH O'DONNELL, ASSOCIATE DEAN

2. EXECUTIVE SUMMARY OF 2016 NAAB VISIT

CONDITIONS NOT MET

| |
|---------------------------|
| 2016 VTR |
| I.2.3 Financial Resources |

STUDENT PERFORMANCE CRITERIA NOT MET

| |
|------------------------------|
| 2016 VTR |
| B.1 Pre-Design |
| B.9 Building Service Systems |
| C.3 Integrative Design |

Interim Progress Report
The Cooper Union
The Irwin S. Chanin School of Architecture
Bachelor of Architecture (160 credits)
Year of the previous visit: 2016

Please update contact information as necessary since the last APR was submitted.

Chief administrator for the academic unit in which the program is located:

Nader Tehrani, Dean

Provost:

N/A

President of the institution:

Laura Sparks, President

Individual submitting the Interim Progress Report:

Elizabeth O'Donnell, Associate Dean

Name of individual(s) to whom questions should be directed:

Elizabeth O'Donnell, Associate Dean

Current term of accreditation:

Eight-year term of accreditation effective January 1, 2016

Text from the most recent VTR or APR is in the gray text boxes. Type your response in the designated text boxes.

1. Progress in Addressing Not-Met Conditions and Student Performance Criteria

I.2.3 Financial Resources

2016 Team Assessment: Cooper Union is experiencing structural budget deficits that have impacted all of the schools, including the School of Architecture; therefore, it has not been demonstrated that the appropriate financial resources are available to support future student learning. As a result of the budget deficits, the college made a significant change in 2014 by transitioning from full scholarship (no tuition) to half scholarship. The budget crisis led to the formation of short-term work groups in 2012: the Revenue Task Force (charged with identifying new sources of revenue) and the Expense Reduction Task Force (charged with identifying immediate operations budget reductions). The college and school have both experienced leadership changes.

The current financial crisis is affecting the architecture program in multiple ways through hiring freezes, budget support reductions, delays in addressing facility accessibility issues, and the continued shortage of faculty offices. Nonetheless, while the school operated with fiscal restraint, the total operating budget increased approximately 29% between FY 2011 and FY 2016 (not adjusted for inflation). In meetings with the students, they said that the financial crisis has been a “distraction” in recent years, which has taken time away from school and the studios. In multiple meetings with students, a common theme surfaced—that students who pay tuition feel that they must “prove” themselves worthy of being in the architecture program to the faculty and to students who do not pay tuition. All students admitted to School of Architecture continue to be admitted on merit; the admissions process is need blind.

The architecture program does have control over the following resources: the Archive, the Cooper Union Institute for Sustainable Design, Art and Architecture Shop, and Architectural Computer Center.

Evident in meetings with President Mea, Dean Tehrani, and the faculty was the resolve to steward the institution and architecture program through this period. During faculty meetings, the faculty spoke passionately regarding their resolve to protect the legacy of the architecture program, including the core value that admission is merit-driven, rather than financially driven. Dean Tehrani discussed efficiencies that have been enacted to focus on advancing the core mission of the school. President Mea detailed his plan to address the deficit as presented in *The Cooper Union for the Advancement of Science and Art. Budget and Financial Projections FY 16*, which provides a detailed budget and financial analysis, including projections for FY 16, FY 17, FY 18, FY 19, and FY 20. The goal of the plan is to provide financial stability for the institution so that it can become cash positive in FY 19. To accomplish this goal, the analysis provides a basis for short-term and medium-term financial and operational planning.

A key component of the plan is to increase revenue generated through tuition, as each entering first-year class pays tuition and the last of the full-scholarship students (current third-year students) matriculate through the architecture program. At the same time, the president is implementing steps to make the college cash positive. As prescribed in the consent decree, a Free Education Committee of the Board of Trustees has been formed to “examine whether The Cooper Union can return to a sustainable full tuition scholarship model that maintains its strong reputation for academic quality within its Art, Architecture and Engineering programs at their historical levels of enrollment.”

In addition to the development work of the Free Tuition Movement, Dean Tehrani is engaging in development activities specifically to support, enhance, and advance the architecture program. During his meeting with the team, President Mea commented that Dean Tehrani is accomplished at fundraising.

The Cooper Union, 2018 Response:

CONTEXT

In spring 2016, when the NAAB team was conducting its site visit at the School of Architecture, The Cooper Union was in a state of profound transition and financial uncertainty. A Consent Decree ending a lawsuit brought against the college and its Board of Trustees in 2014 for its decision to charge its undergraduate students tuition for the first time in a century, an agreement that engaged the Attorney General of the State of New York, had been formally approved by the Supreme Court of the State of New York just four months before.

The Consent Decree mandated changes to The Cooper Union Governance and the composition of the Board of Trustees, and granted *cy pres* relief for The Cooper Union to continue to charge tuition to its undergraduate degree students. The agreement also mandated the appointment of an independent Financial Monitor and the formation of a Free Education Committee of the Board of Trustees (FEC) that together would assess the financial condition of The Cooper Union, the impact that the decision to charge tuition had had on the academic quality and reputation of the school, and develop a plan by which the board and administration of the school could pursue a return to full-tuition scholarships for all undergraduate students while maintaining The Cooper Union's strong reputation for academic quality within its Art, Architecture and Engineering programs at their historical levels of enrollment.

The Attorney General selected Kroll Associates, a corporate investigation and risk management firm to serve as Financial Monitor. Kroll Associates officially began their work as the Financial Monitor on approximately 1 July 2016. The duties of the Financial Monitor as specified in the Consent Decree included:

- Attending all meetings of the full Board of Trustees, Board of Trustees Finance and Business Affairs Committee, and the Free Education Committee.
- Issuing its own annual report.
- Summarizing the financial condition of The Cooper Union
- Reporting on measures proposed by The Cooper Union's Board of Trustees and its committees relating to the Consent Decree, and advising on whether those actions were made in good faith and in the best interest of The Cooper Union
- Identifying any non-budgeted expenditures by The Cooper Union exceeding \$100,000 and any non-budgeted contractual obligations of Cooper Union exceeding \$125,000 during the preceding twelve-month period
- Analyzing the Free Education Committee (FEC) progress report and final report, the feasibility of its strategic plan, and the practicality of The Cooper Union's returning to a full-tuition scholarship model

The FEC had begun its work just weeks before the spring 2016 NAAB visit.

The NAAB visiting team met with leaders at the school who were extremely committed to the mission of the college and to the students but were often in acting or interim, not permanent, positions. Bill Mea was serving as Acting President and also as the college's Vice President for Finance and Administration. The Dean of the School of Art had recently announced that she would be leaving The Cooper Union to return to Europe as of 31 July of that year. The School of Engineering was also being led by an acting dean; the School of Engineering had been

without a permanent dean for four years. There were clear signs in April 2016 that the school was recovering from its financial crisis of 2013, but many concerns about interim leadership and the college's continued structural operating budget deficits, remained.

Since the time of the NAAB site visit, extraordinary progress has been made in strengthening all aspects of the institution, particularly in the areas of institutional leadership and financial stability and health. Changes in the governance and leadership of the school are addressed in Section 2 of this report. Progress on building the financial stability of The Cooper Union while reinvesting in its academic programs and facilities, and designing a plan to return to full tuition scholarships is outlined here.

The Financial Plan to Return to Full –Tuition Scholarships, 2016-2018

Following almost two years of meetings, the Free Education Committee (FEC) delivered its final report, titled *Recommended Plan to Return to Full-Tuition Scholarships* to the Financial Monitor, the New York State Attorney General and The Cooper Union Board of Trustees on Monday 15 January 2018. This report defined the financial benchmarking parameters, the metrics used to analyze the current fiscal health of the institution, and the proposed timeline that indicated when The Cooper Union could return to providing 100% full-tuition scholarships to all enrolled undergraduates while maintaining the fiscal health of the institution.

The Financial Monitor delivered annual reports on the work of the Free Education Committee on 15 February 2017 and 15 February 2018. In its first report, the Financial Monitor largely concurred with the financial analysis of the Free Education Committee, which described the school's financial situation as grave. From the report:

“In short, the financial condition of Cooper Union is under considerable stress caused by the need for additional liquidity. This need has been driven by persistent operating losses occurring over a period of years, which the Board and the Cooper Union administration are in the process of addressing. The financial issues Cooper Union faces are not limited to annual operations, however, and we believe a view of the full, long-term financial health of Cooper Union is essential to any assessment of Cooper Union's financial condition. Our discussion below assesses Cooper Union's current operating structure, as well as the long-term structural weaknesses of its balance sheet.”

The report cautioned that the focus of the Committee's work “must be first on achieving a sustainable level of financial health, and that once the institution became a fiscally thriving organization, it could consider how to move toward a return to the full-tuition scholarship policy.

In 2018, the Financial Monitor assessed the final plan of the Free Education Committee as “responsible and aggressive.”

The FEC's recommended Plan was posted on The Cooper Union website and community feedback was solicited through a series of meetings and e-mails that engaged faculty, students, staff, the school leadership and the alumni. Comments were collected and submitted to the Board.

The full *Free Education Committee Recommended Plan to Return to Full Tuition Scholarships* can be accessed via The Cooper Union website at the following link:

https://cooper.edu/sites/default/files/uploads/assets/site/files/2018/FEC_Report_Jan18.pdf

Highlights of the FEC recommendations and strategies included:

- Address Key Needs and Financial Priorities – The FEC, on behalf of the Board of Trustees, and the Administration developed and recommended a comprehensive plan to return The Cooper Union to full-tuition scholarships for all undergraduate students in 10 years while also investing in the academic program and building a financially healthy and sustainable institution.
- Increase Scholarships Beginning in 2 Years – Begin increasing tuition scholarships in as few as two years by meeting critical fundraising, operating expense, and operating cash surplus goals.
- Return to Full-Tuition Scholarships in 10 Years – This accelerated the projected time frame for a return to full-tuition scholarships from 22 years to 10. The Recommended Plan also provides for investment in our academic programs and physical plant and the building of long-term financial health.
- Currently, Cooper Provides Scholarships to All Undergraduate Students Covering 76% of Tuition Costs, On Average. While tuition was first instituted in fall 2014, Cooper has continued to provide considerable scholarship levels for students.
- Cooper’s Financial Climb is Steep: \$250 Million Reserve is Required – Decades of structural deficits and unfunded needs have created significant financial need. Operating & capital reserves require \$152 million; Deferred maintenance requires \$11 million; Bridge Loan payment requires \$39 million; Post-retirement health insurance funding requires \$48 million
- Rigorous Expense Management & Significant Fundraising – The Recommended Plan includes a set of Revenue Initiatives, Expense Management Initiatives, and Revised Financial Assumptions as well as built-in financial guardrails that would require the school to pause and re-evaluate if it was not meeting the financial goals outlined in the Plan.
- A Total of \$6.9 million in Expense Reductions – to be implemented over a three-year period, to begin FY 2017.
- Strategies for increased earned revenue generated through room rentals and other ancillary revenue streams.
- Reinvestment in the academic programs to foster academic programs of high engagement, rigor and exploration

On March 14, 2018 in a landmark decision, The Cooper Union Board of Trustees voted to accept the financial plan of the Free Education Committee with modifications that resulted from community responses to the plan and comments from the Financial Monitor as released in its annual reports. With the formal adoption of the plan, titled The Cooper Union Plan to Return to Full Tuition Scholarships, the Board declared its unequivocal commitment to returning The Cooper Union to free. The Board acknowledged the plan as “an ambitious and achievable plan that interlinks a sustainable return to full-tuition scholarships with building long-term financial health and investing in our academic programs. This is intentional—a return to free only matters if The Cooper Union has the financial wherewithal to sustain it and if our academic programs remain exceptional.”

There were additional initiatives and bullpen ideas [which were more an open set of options for further consideration] that could be further explored should the original components of the Plan not play out as expected. However, these additional ideas had uncertainty and potential downsides and as such would only be pursued if such uncertainties are reduced or eliminated.

The Board's most significant modifications (in terms of impact on the School of Architecture) to the original FEC recommendations included:

- The cost to students of the residence hall would be raised only by usual, annual inflationary increases (approximately 3%).
- All recommended reductions to scholarships for graduate students would be deferred until FY2020. Any proposed reductions would be phased over the next five years with close attention paid to improving the quality of the graduate programs.

The full text of *The Cooper Union Plan to Return to Full Tuition Scholarships* can be accessed via The Cooper Union website at the following link:

http://cooper.edu/sites/default/files/uploads/assets/site/files/2018/PlantoFree_sprds.pdf

Institutional Fundraising for Cross Disciplinary initiatives

Through hard work and cooperation across schools, The School has increased institutional funding for capital and other projects.

- In early 2018, The Cooper Union was awarded a \$2 million grant from the IDC Foundation to create a new multidisciplinary workshop space. The IDC Foundation is a charitable institution providing funding for scholarships, fellowships, and grants to educational institutions for students in the design, engineering, and construction fields. IDC released a request for proposals for its first round of grants in the summer of 2017. In addition to Cooper, Columbia, NYIT, NYU, and Pratt also received various amounts of funding.

Cooper's proposal was a collaborative exercise, involving members of the development staff, deans, and associate deans of the three professional schools. Each school identified three to five high-level concepts which were then narrowed down to two main themes. Leaders solicited ideas and feedback for each theme from the faculty. The idea of an interdisciplinary digital fabrication workshop that extended the resources of an existing 8,000 ft.2 Art and Architecture workshop was the clear front-runner. The resulting Art, Architecture, Construction, and Engineering (AACE) Workshop will serve as a catalyst for integration across the institution, with equipment allowing projects that involve "making," from 3-D printers to robotic arms to virtual-reality technologies. The space will take advantage of one of Cooper's longstanding salient qualities—translating intellectual activities into physical form and speculative as well as practical applications. This project will be an extraordinary asset to the School of Architecture. Construction of the first phase of the project began November 2018.

- The Cooper Union received a \$500,000 Higher Education Capital Grant from the State of New York in additional funding to be used for capital costs of the AACE workshop, bringing total funding for the project to \$2.5 million.

- The IDC Foundation awarded The Cooper Union an additional \$130,000 for scholarships and student travel.

School of Architecture Fundraising

With the assistance of The Cooper Union Development office, the School of Architecture has been more proactive at fundraising and writing grant proposals for scholarships, improved facilities and physical resources critical to the evolution of the academic program, as well as for

support of the work of the School of Architecture Archive, which is responsible for the School's exhibitions and publications program, the student work collection and other collections that support the pedagogy of the school. We have been very successful at this endeavor.

In FY 2017, The Cooper Union approved expanding the School of Architecture Archives' position of Collections Manager from part time to full time. The Collections Manager would devote at least 8 hours per week to writing grant proposals for the School's exhibition and publications programs, which are administered by the School of Architecture Archive. Additionally, the Archive would raise all funding necessary for its Student Work Collection Digital Access Project, a newly initiated five-year effort to preserve, digitize and catalog a photographic archive of student design projects dating from the 1930's through the present. The Collection, which includes analog image, text, and audio records as well as born-digital media, documents nearly 4,800 projects by over 1,500 students. Once digitized, it will become one of the first comprehensive, online, public resources for historical and contemporary architectural pedagogy.

-The School of Architecture Archive has been successful securing in grants for the Digital Access Project from the Institute of Museum and Library Services, a federal agency (\$149,736); the Leon Levy Foundation (\$105,978); the Metropolitan New York Library Council (\$9,035); and the National Archives' National Historical Publications and Records Commission (\$99,241). A beta version of the digital collection will launch online in the fall of 2019.

-The School of Architecture Archive was successful in securing the following grants for its exhibition and publication program in FY 2019, including \$10,000 from the Graham Foundation for the exhibition Archive and Artifact: The Virtual and the Physical (Tuesday, October 23 – Saturday, December 1, 2018) and \$18,000 from the New York State Council on the Arts for the exhibition Nivola in New York: Figure in Field (Tuesday, October 22 – Saturday, November 30, 2019).

-Four new endowments of \$1000,000+ have been established for the benefit of the School of Architecture: The Abhiraj Bhojar Scholarship Fund, for an exceptional student in their final year of study; The Sue Ferguson Gussow Scholarship Fund, to benefit a first-year student who has demonstrated a deep interest in and exceptional skill in free hand drawing; The Diane Lewis AR '76 Memorial Architecture Travel Fellowship In Search of Civic Space, for travel and research by one or more architecture students following the completion of the Design IV Studio; The NADAAA Fund, for support of the School of Architecture publications program; and The Parvaneh Tehrani Scholarship Fund, to support women in architecture.

Impacts of Expense Reductions on the School of Architecture

-The individual schools and departments at The Cooper Union were given wide latitude to determine how to meet their cost reduction targets. As salaries and benefits account for 92% of the School of Architecture budget, that the only way to meet our expense reduction targets was to reduce the total cost of salaries.

In spring 2016, the resident faculty of the School of Architecture was comprised of 3 full time professors with tenure and 11 proportional time faculty, who teach a 2/3 full time load and receive full benefits. (However, proportional time faculty are not eligible for paid sabbatical leave).

It had been a concern for some years that the full-time faculty had become too small to sustain the strong intellectual culture of the school, to be available to engage with students for advising and mentorship outside of class time, to steward new initiatives and to develop and foster the necessary evolution of the curriculum to meet the changing needs of society and the

profession. Prior to 2003, the faculty roster averaged 7-8 full time faculty and 2-4 proportional time faculty.

Dean Tehrani decided to begin the process of rebalancing the faculty in 2016, increasing the full-time faculty while decreasing the number of proportional time faculty. Given the high cost of benefits for faculty, proportional faculty, who taught a 2/3 load, generated disproportionately higher benefits costs. Decreasing the number of proportional faculty would allow the school to meet its expense reduction targets while simultaneously rebuilding the full-time faculty.

Proportional faculty, many of whom have taught for 25 years and more at the school, with successful practices and significant academic work, would be offered positions as Distinguished Adjunct Faculty (pending union agreement with the title change).

Since spring 2016, 2 tenure track faculty have been hired and the search for 3 additional tenure track faculty is currently in the short list phase. One proportional time faculty is now on tenure track, 2 negotiated terminal contracts and 2 have agreed to continue teaching on an adjunct basis. Five proportional faculty are being considered for reappointment for the 2018-2019 academic year; the results of the full-time search will determine how many proportional time contracts can be renewed. CV's of the new full time and proportional time faculty are provided in section 4. Appendix.

This process of restructuring the faculty has resulted in substantive expense reductions while permitting full time faculty hires, without any reduction in overall teaching hours.

- The School of Architecture FY2019 operating budget included a net decrease of about 2% over FY 2018, but we were nonetheless able to increase lines for exhibitions and publications as these were prioritized in the strategic plan of the school. Additional funding through endowments and restricted funds allowed for an increase in all available funding of about 5% over FY 2018.

-The School of Architecture Dean's discretionary Fund. This \$75,000.00 line was negotiated by the Dean for the benefit of the school as one of the terms of his contract. While the Financial Plan stipulated significant expense reductions, the School was able to meet its targets while maintaining this fund. The fund has been used to provide for many important enhancements to the academic program in the last three years, including travel in support of studio work to Mexico City (Fall 2016), Chicago (Fall 2017), Puerto Rico (Sp 2018), Hong Kong (Sp 2018) and Ulysses, KS (Spring 2018). The fund has additionally provided for new digital fabrication equipment dedicated to the School of Architecture, and faculty development funding for presentations at conferences.

Strategic Planning

The Cooper Union Plan To Return To Full Tuition Scholarships is much more than a financial plan. It has provided The Cooper Union with the means by which to re-build trust and to do the difficult work of solving decades-long operational deficit spending through the shared aspiration of the return to free education for undergraduate students. Progress on the plan has already been measurable. By the close of FY2018, through a combination of fiscal discipline, increased income from non-tuition sources, increases in alumni participation rates in giving, a high level of private donor commitment and a growing list of institutional donors. financial goals for year 1 of the plan (FY 2018) had been exceeded.

Moving forward, the Plan will serve as one of the central components of The Cooper Union's broader strategic planning process, as the school seeks to "move forward to free" while

renewing academic programs to prepare students for the new opportunities and challenges of our increasingly global, digital and imperiled, world.

B.1 Pre-Design

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 121 Design II; ARCH 131 Design III; ARCH 141 Design IV; and ARCH 151 Thesis. Certain aspects of the criterion, such as “an analysis of site conditions,” were addressed the majority of the pre-design elements within a comprehensive program that they set out to implement in their projects.

The Cooper Union, 2018 Response:

The course descriptions that define expected outcomes for the Design Studio sequence provide for investigating the relationship between user needs, physical activity and program, in increasing complexities, in the Design II, Design III and Design IV studios. Practice at taking a “brief” or sketch program description, interrogating it, and transforming it from a generic outline to a program for a more specifically defined use or inhabitants with specific need has been addressed in both the ARCH 121 Design II and ARCH 141 Design IV studios.

In the Design II Fall 2017 semester, students analyzed and developed a program for a community library in the east village. In Design II Fall 2018, students were required to take the generic brief of a “Contemporary Circus Conservatory” and develop a program specific to a particular performance/audience typology and set of activities that were suggested by a structural type that had been defined and developed in a previous exercise.

In Design IV Fall 2018, two separate studios investigated the program as specific to cultural activities that have changed over time, generating new typologies of space and form. The two studios shared workshops, exercises and a common site while developing designs for two different programs: one a museum and the other a theater. Early assignments and dedicated lectures addressed the topic of program from multiple perspectives. Students were required to take a template program and redefine it in terms of viewing specific works of art (museum) and different types of performance activities, as well as the changing nature of the relationship between audience and performer (theater). In both studio sections, the “design project” itself did not begin until week 8 of the semester, allowing almost half the semester for pre-design investigations.

Edited syllabi are included in Section 4. Appendix.

B.9 Building Service Systems

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in exams prepared for ARCH 134A-B Environmental Technologies. Mechanical and fire protection systems were clearly taught throughout the curriculum; however, work that supported the teaching and student understanding of plumbing, electrical, communication, and vertical transportation security systems was scarce or not found at all.

The Cooper Union, 2018 Response:

The School of Architecture’s seven-semester structures sequence, which spans the second through the fifth years of study, has long been a defining feature of the school’s pedagogy. Structural principles are often significant to the formal organizational system of students’ design project, and are explicit in the architectural form. Given the increasing urgency of students to be deeply knowledgeable about environmental issues at all scales, and the need for architecture directly address them, in spring 2018 the School of Architecture faculty approved a new two hour, two-semester required course

ARCH 124 A, B Environments in the second-year curriculum, which is taught in the same year as ARCH 122 Structures I, a conceptual introduction to principles of structural behavior. This class will provide students with a conceptual grounding in environmental issues at the urban and building scales in the second-year curriculum, when complexities of program, context and site are introduced in the studio. The class will be directly aligned with the Design II spring semester studio, through common faculty and shared projects.

Previously, ARCH 134A, B Environmental Technologies was a student's first classroom introduction to environmental concepts and building systems. ARCH 124A, B Environments shifts the conceptual groundwork of broad environmental concerns as well as an understanding of the building interior as a complex environment system earlier in the curriculum. This will allow ARCH 134A, B to focus on a broader array of internal building systems, as they create, form and serve the interior environment. ARCH 134B, spring semester, a three-hour class, has been restructured to allow for biweekly case studies, and to make use of practical demonstrations and project based assignments. The faculty teaching the class has a weekly appointment in the Design III studio, to work with students to develop the necessary systems for their Design III studio projects. The program for the Design III spring semester studio is Housing.

Edited syllabi are included in Section 4. Appendix.

C.3 Integrative Design

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for a few of the high pass projects in Arch 131B Design III, and the ability to integrate space and structure was evidenced in most projects. In contrast, the integration of multiple systems, especially those including environmental systems, building service systems, and the building envelope and assemblies, was not evidenced throughout the work.

The Cooper Union, 2018 Response:

The first truly integrated Design studio is assigned in the second semester of year 3. This follows the analysis studio in which students do a comprehensive analysis of the form, concept and systems of a building, as well as its relationship to the city or landscape in which it is located. The courses ARCH 132 Structures II, ARCH 134 Environmental Technologies, and ARCH 135 Building Technologies, all a part of the third-year curriculum, provide for design projects to be developed in both the studio and the classes that teach specific technical content.

The syllabus for ARCH 131 Design III for spring 2017 is attached in Section 4. Appendix. The studio began with a design for a light scoop, thereby having a performative building element/system orient and drive the design process from its beginning. This gave emphasis to systems as determinants of space and form, as well as necessary building performance.

The program for the Integrated Studio in spring 2017 was housing. The School of Architecture partnered with the University of Puerto Rico (UPR) to use the integrated studio to respond to the extreme hardship and social crisis due to hurricanes Irma and Maria that struck the island in fall 2017. The goal was to make immediate and long term contributions to the University and its students, the city of San Juan and the discipline through a shared studio experience. The two schools used a common brief for the project. Professor Jose Javier Toro helped to design the studio brief with his colleagues at UPR and Cooper. A "hybrid" program of housing, units, commercial activities and educational institutes that might expand and contract over time as community needs changed was defined during the design process. Housing provided students with an opportunity to resolve the environmental and other systems of a building with less formal and technical complexity than a museum.

Given the success of the housing studio, it will be repeated as a program in Spring 2019. This year, the school will partner with Help USA who will assist with developing the studio brief and will provide the Design Studio with community contacts and site information for one of its properties ready for development. Help USA is a national organization that provides housing and the supportive services necessary for the homeless and people in need to become and remain self-reliant. HelpUSA sees housing as the beginning of a community-building network and envisions a world where safe and stable housing is a starting point for everyone. It manages permanent supportive housing, operates shelter and runs prevention programs. Additionally, the School of Architecture will be part of a network of local schools of architecture conducting housing studios, who will share programs, research, knowledge and roundtable conversations about contemporary housing practices. The architect Inaqui Carencro, who has significant experience in housing design, will join the studio team.

Students will have another opportunity to complete an integrated design in Design IV. The fourth year had previously been devoted to projects in urbanism. At least one student is now the design of a complex institutional project, from programming to façade and building systems. Syllabi for Design IV fall semester studios are attached in Section 4. Appendix.

2. Changes or Planned Changes in the Program

Please report such changes as the following: faculty retirement/succession planning; administration changes (dean, department chair, provost); changes in enrollment (increases, decreases, new external pressures); new opportunities for collaboration; changes in financial resources (increases, decreases, external pressures); significant changes in educational approach or philosophy; changes in physical resources (e.g., deferred maintenance, new building planned, cancellation of plans for new building).

The Cooper Union, 2018 Response:

SIGNIFICANT INSTITUTIONAL CHANGES

Since spring 2016, there have been significant changes in almost all aspects of The Cooper Union at the institutional level, and many at the program level.

1. The Cooper Union transitioned from an interim president to a new permanent president. From The Cooper Union website:

“On 4 January 2017 Laura Sparks was appointed as the thirteenth president of The Cooper Union for the Advancement of Science and Art, the first woman in the role. Sparks has made her focus ensuring that Cooper continues to provide students with an outstanding education, positioning the school for continued excellence in the decades ahead, building collaborative efforts across the community, and improving the school’s financial outlook. Under her leadership, Cooper is now pursuing a comprehensive plan to achieve full-tuition scholarships for all students, returning to its roots of providing a free education for students of extraordinarily high potential from all walks of life. In the plan’s first year, results exceeded financial goals with an operating cash surplus that reversed years of deficits. Another key initiative in Laura’s early tenure was to reawaken the school’s historic Great Hall as an iconic forum where people contest and shape the important issues of our day.”

Spark’s successful candidacy was the result of the deliberations of a Presidential Search Committee that represented all the advocacies that come to bear on The Cooper Union, its mission and its future. The committee included the Chair of the Board of the Trustees, the Chair of the Governance Committee, two full-time faculty members who were self-nominated and approved by the Board of Trustees, one elected alumni trustee, one member of the adjunct

faculty (also an alum) and a representative (an alum and faculty member) who brought the lawsuit against the institution in the wake of charging tuition. The Committee understood the social and historical importance of the institution and therefore was united in its desire to both protect the social and philanthropic legacy while ensuring the ongoing mission for the future of The Cooper Union.

The impact that President Sparks has had on galvanizing The Cooper Union community toward a shared goal of the return to free education, while advancing the intellectual and creative work of its four faculties, has been nothing short of transformational. She has helped the institution to move on from a state of conflict, acrimony and financial insecurity to one of cooperation and common purpose while fostering robust dialog and discussion about the mission, vision and goals of the institution as well as the individual schools.

In the two years since her arrival, the president has acted to restructure many departments throughout the institution. Nearly three quarters of all leadership personnel are new appointments since spring 2016, including Institutional Assessment, Finance/Administration, Human Resources, Information Technologies, Facilities Management and other key senior administrative positions.

2. Four appointments have been made at the Deans level at the college. Following a year as acting dean, associate professor Mike Essl was appointed Dean of the School of Art. Essl, an alumnus of the School of Art, is an accomplished graphic designer and educator. Barry Shoop was appointed Dean of the Albert Nerken School of Engineering. Dr. Shoop joins The Cooper Union following a 24-year career at the US Military Academy at West Point, where he is professor and head of the Department of Electrical Engineering and Computer Science until he begins his position at The Cooper Union on 1 January 2019. Associate Professor Peter Buckley of the Faculty of Humanities and Social Sciences is currently serving as acting dean of that faculty.

3. New and revised mission and vision statements were crafted by a committee with broad participation and approved by the Board of Trustees on December 20, 2017. The statements read:

VISION

The Cooper Union for the Advancement of Science and Art is dedicated to Peter Cooper's radical commitment to diversity and his founding vision that fair access to an inspiring free education and forums for courageous public discourse foster a just and thriving world.

MISSION

Our mission is to sustain The Cooper Union as a free center of learning and civic discourse that inspires inventive, creative, and influential voices in architecture, art, and engineering to address the critical challenges and opportunities of our time.

4. Following a two-year self-study process that engaged faculty, students, staff and administration, in spring 2018 The Cooper Union successfully completed its decennial reaccreditation process with the Middle States Commission on Higher Education.

5. Strategic planning was launched in earnest for the first time in a decade. In June 2017, The Cooper Union hired a new Director of Strategic Initiatives and Institutional Effectiveness. This position is part of the President's leadership team and plays a key role in shaping The Cooper Union's long-term financial health, academic vitality, and civic leadership. The Director leads the strategic planning process of the institution that cultivates an analytical, empirical, and institutional data-informed approach to problem solving and decision making, as well as

facilitating the development of a culture of inquiry, experimentation, and evidence in and for student success.

The deans and department heads now submit a comprehensive document to the President in August that articulates both annual and 3 year goals, assessing program strengths, external and internal pressures that could impact successful accomplishment of the goals, and timelines. The annual plans are discussed across schools and departments and the spring budget reviews are linked with the annual plans.

NEW RESOURCES

1. The Cooper Union received a grant to plan, design and build an “Art, Architecture, Construction and Engineering” workshop to extend the capabilities of the existing Art and Architecture workshop, which are unmatched at any other School of Architecture for classic analog fabrication and modeling. The AACE workshop will support a wide range of additive and subtractive digital capabilities, including large format laser cutters, 3-D printers for a range of materials, including structural materials, CNC machines, etc. The space is conceived as a cross disciplinary, institutional resource. The project is currently under construction. Faculty are already developing courses and projects to take best advantage of this new resource, long anticipated by the School of Architecture. It will enhance the school’s strength in fabrication and physical model making, opening up new methods of investigation and continuing a practice of “thinking through making”.

RESTRUCTURING THE FACULTY

In spring 2016 the Resident faculty of the School of Architecture was comprised of 3 full time faculty and 11 proportional time faculty, who teach 2/3 full time load and receive benefits. As discussed in Section 1, 1.2.3 Financial Resources, Dean Tehrani is in the process of restructuring the faculty to reduce the number of proportional time faculty to allow for more full-time appointments, with a goal of 6-7 full time faculty and 3-4 proportional time faculty.

Proportional faculty, many of whom have taught for 25 years and more at the school, with successful practices and/or significant academic work, are offered positions as Distinguished Adjunct Faculty as their proportional time contracts expire. At the same time, new proportional time and full time appointments are being made.

This restructuring was put in motion during the 2017-2018 academic year. Since that time, one proportional time faculty retired, two proportional time faculty negotiated terminal contracts, 1 new proportional time faculty and 2 tenure track faculty have been hired. One of the new full time appointments was from the proportional time faculty. Five proportional faculty are being considered for reappointment for the 2019-2020 academic year. One former proportional time faculty has been teaching this semester as an adjunct faculty.

A faculty search committee is currently conducting interviews to develop a short list in its search for three additional tenure track positions. The goal is to bring three new full time faculty to the school in September 2019. If the search is successful, the Resident faculty could be comprised of 7 full time faculty; the results of the full-time search will determine how many proportional time contracts can be renewed.

New adjuncts have also been hired in the past two years. New hires have included faculty with expertise in drawing, digital design and fabrication, materials research, landscape architecture, housing design and cultural ad institutional projects. Many are principles or associates in significant practices. Visiting faculty with specific research or practice agendas have been invited to teach in the Design IV studios.

Almost 2/3 of the current adjunct faculty are new to the school since spring 2016.

CV's of the new full time and proportional time faculty are provided in Section 4. Appendix

CURRICULUM

-In Spring 2017, the Faculty, following the recommendations of the curriculum and administrative committees, created the new course **Arch 193 Experience in Practice** that provides course credit for supervised experience in the practice of architecture or a related discipline in the built environment. While this class does not explicitly serve to meet any single SPC, this experience is invaluable in advancing students understanding of practice and their ability to work in a more comprehensive way on a design project.

As it continues a comprehensive review of the curriculum, the Faculty, following the recommendations of the curriculum and administrative committees, instituted several changes to the first two years of the Curriculum in spring 2018, to take effect fall 2018:

-Calculus (year 1) and physics (year 2) will now be a sequence of two classes in the first year
-Freehand Drawing (year 1) and Descriptive Geometry (year 2) are replaced with a sequence of 4 courses: ARCH 117A Representation I and ARCH 117B Representation II (year 1), and ARCH127A Representation III and ARCH 127B Representation IV (year 2). This allows for a lighter course load for first year students and provides for a greater integration between the studio classes and the exploration of drawing itself as a determinate in architectural planning and form.

-A new two hour two semester required course **ARCH 124 A, B Environments** was added to the 2nd year curriculum to provide for the introduction of critical issues of the "natural" environment and the recognition of contemporary interior space as a complex environment both mechanical and passive. See section 1.B.9, Building Service Systems for more about the intentions of this course. Syllabi are provided in Section 4. Appendix.

While students are able to take elected classes in the schools of art and engineering after their second year, students are eager to engage in cross-disciplinary studies at the foundational level. President Sparks has launched three initiatives that will likely effect the curriculum of the School of Architecture, potentially providing for a shared design class for students from all three schools:

-A Diversity Task Force was launched to develop a pro-active approach to racial, gender and economic diversity and inclusion at The Cooper Union, to make recommendations on fostering an inclusive and equitable campus climate and to recruit, retain and develop a diverse community at the school.

-A Community Planning Collaborative comprised of faculty, students and staff is in the process of formulating and recommendations toward the school's strategic planning process with a focus on student growth and learning, support for faculty and students, and the many ways that the school defines and is committed to free education.

-A "council on shared learning" will be formed to identify the shared literacies, inquiries and proficiencies in a holistic education that serve to make students' time at The Cooper Union relevant, compelling and distinctive, regardless of their professional field of study. As part of this effort, the council will engage the broader community in a discussion of opportunities across the Schools and a re-envisioning of the role of Humanities and Social Sciences to prepare students for active democratic and global citizenship and service, to inform and enrich students' professional practices, to foster imaginative and

critical thinking, and to serve as a standard bearer for an integrated liberal and professional education.

The council will commit to doing a thorough review of the issues covered in the Charge to the Council in all four academic programs, a re-envisioning of the role of humanities and social sciences as a central and signature feature of The Cooper Union experience, and meaningful enhancements to the Architecture, Art, and Engineering programs and co-curricular experiences to achieve shared learning goals.

ENROLLMENT

The School of Architecture's historic enrollment goal has been 150 students, an average of 30 students for each year of the 5-year program. With the launch of the graduate program almost 10 years ago, and graduate classes averaging 10 students, the enrollment of any one undergraduate class averages 28 students.

Following a re-design of studio desks to provide for drawing (both digitally and by hand), model making and storage, as well as shared spaces for small-group critique and discussion, the optimum number of students in the big studio has been determined to be 112 students. This allows for an average of 26 students in each undergraduate class. The new desks are being priced for purchase in spring 2019.

Beginning with this admissions cycle, we will target classes that average 26 students.

3. Summary of Activities in Response to Changes in the NAAB Conditions [2014 NAAB Conditions](#)

The Cooper Union, 2018 update: Not Applicable

4. **Appendix** (include revised curricula, syllabi, and one-page CVs or bios of new administrators and faculty members; syllabi should reference which NAAB SPC a course addresses)

The Cooper Union, 2018 update:

4.a CV's for New Resident Faculty: Full Time and Proportional Time Faculty

Lorena Del Rio, Assistant Professor, Full Time Tenure Track. 2017-2018: ARCH121A Design I, fall semester; ARCH 131B Design III spring semester. **2018-2019:** ARCH 121A Design II fall semester; maternity leave spring semester.

Mersiha Veleddar, Assistant Professor, Proportional Time. 2017-2018: ARCH 111A Architectonics, fall semester; ARCH 131B Design III spring semester. **2018-2019:** ARCH 111A Architectonics, fall semester; ARCH 131B Design III spring semester.

Michael Young, Assistant Professor, Full Time Tenure Track. 2017-2018: ARCH 482.01 Graduate Seminar in Technologies, fall semester; ARCH 121B Design II spring semester; **2018-2019:** ARCH 411 Graduate Design Research Studio I (fall semester), ARCH 121 Design II, spring semester

4.b Syllabi

LORENA DEL RIO

2008 BS and Master degree in Architecture School of Polytechnic University of Madrid
2017-Present Assistant Professor at The Irwin S. Chanin School of Architecture of The Cooper Union
2016-2017 Assistant Professor Architecture Division CCA SF
2016-2017 Co-director Build-Lab California College of the Arts. SF
2013-2016 Visiting Assistant Professor Cornell University
2012-2013 Visiting Critic Architecture Department Cornell University
2009-2010 Completed courses in Architecture PhD at ETSAM
2011 - Currently completing PhD at ETSAM
2005-2006 Teacher Assistant "Advanced Urban Projects" at at ETSAM
2005-2006 Research Group "MINIMAL HOUSING" at ETSAM
2014 RICA*Studio founded, in partnership with Iñáqui Carnicero
2008-2012 Project Architect at Selgascano Office. Madrid

AWARDS

2018 FAD International Architecture Award, Ideas City Cooper Union. SELECTED Spain
2017 Interpretation Center for Montiel Castle. Ciudad Real. Competition Entry. Honorable Mention
2017 FAD International Architecture Award, English for Fun. SELECTED Spain
2016 Golden Lion Award for the best National Pavilion at the Venice Architecture Biennale. Italy
2016 Final stage Competition for the New Elementary and Maternal School in San Denis, Paris
2014 Dalseong citizen's gymnasium Competition. Honorable Mention
2013 GA Gallery International "Emerging future" 2013. Japan
2012 GA Document International "Emerging future" 2012. Japan
2011 Honorable Mention International Competition for the new Sculptures Museum in Leganes, Madrid.
2011 Honorable Mention European II International Competition in San Bartolomé, Spain
2009 Shortlisted . Guest House Competition in Villafranca de los Barros. Extremadura with Iñáqui Carnicero
2008 Second Prize. Collaboration with Raul del Valle at New Police's Courts Building Competition in Madrid
2007 First Prize. Collaboration with Iñáqui Carnicero at VIVA Competition for the creation of 320 Experimental Housing in Madrid
2005-2006 Awarded MEC Scholarship from the Spanish Ministry of Education
2004-2005 Second Prize Emilio Larródera Urbanism Awards, C.O.A.M
2003 Awarded Scholarship from the EU-exchange program at Roma Tre University

BUILT WORK

2018 Playground in the rooftop of "La Fe" Hospital in Valencia (Built)
2018 Design and co-curation of Unfinished Exhibition at the City College in New York City (Built)
2018 Design and of Unfinished Exhibition in Mexico City (Built)
2018 Design and of Unfinished Exhibition in Tokio, Japan (Built)
2017 Design and of Unfinished Exhibition at Casas XVI in Santo Domingo, Dominican Republic (Built)

2017 Ideas City for the Cooper Union Architecture School. Installation. NYC (Built)
2017 Exhibition Pavilion for the Royal Spanish Academy in Rome for ARCO Contemporary International Art Fair in Madrid (Built)
2016 Design of "Unfinished" Exhibition at the Venice Architecture Biennale 2016. Italy (Built)
2016 English for Fun center headquarters in Madrid. Spain (Built)
2015 Experimental Sustainable Villas and Common's building in Nalati National Forest. China (Design Development)
2015 Renovation of Anthropology Museum in Madrid
2010 Young Potential Development Headquarters Madrid (Built)

LECTURES

2018 Lecture part of the Lecture Series at NJIT Fall 2018
2018 Lecture with Juan Navarro Baldeweg and Xaveer De Geyter on the "Master Class of The Grand Prix National de L'Architecture"
2018 Speaker Round Table "Exporting Professors: Transferring Urban and Architectural Models and Teaching Approaches" COAM
2018 Lecture at Architecture Week Milano
2018 Speaker Design of the Future Symposium New York City
2018 Moderator of the Round Table "Architectural Strategies Under Constrain" with Atelier Bow-Wow and Shingo Masuda
2017 Speaker "Procesos" together with H Architects and Jacobo García Germán at the Madrid Architecture Association, Spain
2017 Lecture at Texas Tech University
2016 Lecture at California College of the Arts
2016 Speaker at "Congreso Nacional XXXIV Ingeniería Hospitalaria"
2016 Speaker at Unfinished Manifiesto Series. Storefront NYC
2015 Speaker at Campus Internacional Ultzama. F
2014 Lecture at University of Puerto Rico with Iñáqui Carnicero
2014 Speaker at SYMPOSIUM "La evolución de la pedagogía: arquitectura en España" Universidad de Puerto Rico. P
2013 Lecture at, University of Houston

EXHIBITIONS

2018 Exhibition GA Hoses Project at GA Gallery, Tokyo. Japan
2017 Expo ArquitectAs Made in ETSAM
2017 Exhibition GA Hoses Project at GA Gallery, Tokyo. Japan
2016 Invited to the exhibition "Sharing Models Manhattanisms". "The Golden Loop" at Storefront Gallery in New York
2016 Curation and design of the exhibition "Unfinished" at the Venice Architecture Biennale
2016 Exhibition GA Hoses Project at GA Gallery, Tokyo. Japan
2016 Exhibition "Building Democracy" in Madrid, Spain
2015 Export, ICO Museum in Madrid. Spain
2015 Exhibition GA Houses Project 2015 in GA Gallery in Tokio, Japan
2014 Exhibition GA Houses project in Tokio, Japan
2013 Exhibition 2013 Emerging Future at GA Tokyo. Japan
2013 Exhibition at Cornell University
2013 Association Vol 5 Exhibition at Cornell University
2012 Exhibition 2012 Emerging Future at GA Gallery, Tokyo. Japan
2012 European II exhibition of awarded works
2012 Sculpture's Museum in Leganes awarded projects exhibition at C.O.A.M.

EDUCATION

Princeton University Graduate School of Architecture, (SOA) Princeton, NJ, 2003-2005 Degree: Masters in Architecture II, [M.Arch II], **The Cooper Union, Irwin S. Chanin School of Architecture, New York, NY, 1998-2003** Degree: Accredited Bachelors in Architecture, [B. Arch.] w. Honorary Distinction

EXPERIENCE & SIGNIFICANT PROJECTS

VELEDAR WORKSHOP, NEW YORK, NY [2013 – PRESENT]

RESIDENTIAL: 101 Central Park West, New York, NY (3,000SF Construction Documents); 37 Riverside drive Duplex, New York, NY (6,000SF Construction Documents); 33 East 70th Street, New York, NY (2,000SF); *Calabar Nigeria Housing*, Nigeria (Concept Design) in collaboration w. Archipelagos Architecture; *Vermont Residence* and Artist Center [Tunbridge, Vermont] (19,000SF); 1105 Park Avenue Street, New York, NY (3,000SF); 1105 Park Avenue Street, New York, NY (3,500SF); 85 Huntting Street, Hamptons, NY (18,000SF); 55 E. 72nd Street, New York, NY (3,000SF); 4 E. 72nd Street, New York, NY (4,000SF); 1220 Park Avenue, New York, NY (4,000SF); 129 E. 69th Street, New York, NY (2,000SF); 930 Belle Meade Blvd, Nashville, TN (10,000SF); INSTALLATIONS: *The Protagonist Installation with Artist Tim Richardson.tv*, Visionare World, New York, NY; *30 Artists, 30 Days, Winter Wonderland*, VisionareWorld, New York, NY

COMPETITIONS: *AIM Architects in Mission*, CoWorking Office Shanghai & Beijing Competition Finalists in collaboration w. Archipelagos Architecture

SKIDMORE, OWINGS AND MERRILL, LLP, NEW YORK, NY [2005-2012]

EDUCATIONAL: *PS62R Net Zero Energy School*, School Constr. Authority Staten Island, NY (68,000 SF); *Elizabeth Academic High School*, School Develop. Authority, Elizabeth, NJ (183,000 SF); *Abu Dhabi Educational Council Headquarters*, ADEC Abu Dhabi, United Arab Emirates (Competition); *High School of Art & Design, Primary School 59*, 250 E. 57th St. New York, NY (104,380 SF). INFRASTRUCTURAL: *Lisbon International Airport*, Lisbon, Portugal (800,000 SF Competition, 1st place); *Chhatrapati Shivaji International Airport*, Mumbai, India (2,200,000 SF); *Pulkovo International Airport*, (900,000 SF Competition, 2nd Place)
HOUSING: *Oberoji Garden City Apartments*, Oberoji, India (300,000 SF); *Poddar House Towers*, Poddar, India (500,000 SF)
LODHA Wadala Mixed Use Supertall Tower and Midrise Residential Complex, India (400,000 SF). OTHER: *SOM Journal 5*, Associate Editor w. Kenneth Frampton, Juhani Pallasmaa, Francesco Dal Co; *SOM Evening Lecture Series*, Curator

TEACHING

THE COOPER UNION, IRWIN S. CHANIN SCHOOL OF ARCHITECTURE, NEW YORK, NY [2005- PRESENT]

ASSISTANT PROFESSOR, PROPORTIONALTIME [Fall 2017 - Present]: 1st Year Studio Coordinator [**Winner of the 2018 ARCHITECT Studio Prize**], 3rd Year Building Integrated Studio, M. Arch II Graduate Thesis Coordinator, Undergraduate Thesis Advisor [advised student received **2017 RIBA Silver Medal**], Graduate and Undergraduate Admissions Committee, Senate Committee
ASSISTANT PROFESSOR, Adjunct [2005-2017]: 1st Year Studio Coordinator [**NYC X DESIGN 2015 Selection**], 3rd Year Building Integrated Studio, Undergraduate and Graduate Thesis Advisor, 4th Year Urbanism Studios

CONFERENCES, LECTURES AND PUBLICATIONS

2018 *Studio Prize*, Architect Magazine; 2017 RIBA *President's Medals for World's Best Projects*, Bustler, ArchDaily and Dezeen Magazine; 2018 Lecture on *'War Architecture'* The Royal Danish Academy of Fine Arts and Architecture, Finder Sted / Taking Place, Copenhagen [May 31st, 2018]; Invited to participate as panelist '2018 ACSA/COAM Madrid Dean's Summit International Conference [June 14-16, 2018], moderated by Lesley Lokko, University of Johannesburg and Juan Roldan, American University of Sharjah; Forthcoming Publication 'Healing the City: Elemental Constructions and the Universal Language of Architecture' research paper selected for publication by **The ACSA** New Instrumentalities; *'Cooper in Transition'*, Birkhäuser Press, Cooper Union, Forthcoming; 2015 *'Open City Symposium' Panelist*, Museum of Modern Art, MOMA, 'Cities of Catastrophes'; 2014 *'In Celebration of Lebbeus Woods Panelist'*, The Cooper Union Great Hall Symposium; 2013 *'30 Artists, 30 Days Winter Wonderland'*, Visionare World

Michael Young, RA
Young & Ayata, LLC
117 9th St, Suite 203, Brooklyn, NY 11215

Teaching

2005 - present Assistant Professor, **Cooper Union**, Irwin S. Chanin School of Architecture

Education

2005 **Princeton University**, School of Architecture, Princeton, NJ
Master of Architecture II - Suzanne Kolarik Underwood Prize

1997 **California Polytechnic University**, College of Architecture, San Luis Obispo, CA
Bachelor of Architecture - Robert Hifumi Odo Design Award

Practice

2007-present **Registered Architect - State of New York**

2008-present Partner/Principal, **Young & Ayata**, New York, NY

M.K. Čiurlionis Concert Centre Competition, Kaunas, Lithuania - *Second Round Finalist*
Bauhaus Museum Competition, Dessau, Germany - *First Place Prize*
The Bosphorus Grove Pavilion, Istanbul Modern Museum, Turkey - *Finalist*
DL1310, Multi-Unit Housing, Mexico City, Mexico - *under construction*
Longhill Road, Single Family Residence, Briarcliff Manor - *construction completed*

Service

2016-present Board of Directors - MacDowell Colony, Peterborough, NH

2013-present Admissions Committee - Cooper Union

Lectures, Conferences, Events

2018 Lecturer - "The Aesthetics of Doubt", **Tokyo University**, Tokyo, Japan
Lecturer - "Recent Futures", **Cal Poly**, Hearst Lecture, San Luis Obispo, CA
Lecturer - "Young & Ayata", **Pratt GAUD**, Brooklyn, NY
Panelist - "Deep Vista" Conference, **Texas A & M**, College Station, TX
Presenter - "Office US: Manual", **AIA Center for Architecture**, New York, NY
Jurist - KROB Drawing Competition, **AIA**, Dallas, TX

2017 Lecturer - "Near Futures", **Yale University**, New Haven, CT
Lecturer - "Close Attention", **Stadelschule**, Frankfurt, Germany
Lecturer - "Icelandic Infrastructures 2036-2056", **Diplareios School**, Athens, Greece
Lecturer - "The Art of the Plausible", **Konstfack**, Stockholm, Sweden
Lecturer/Panelist - *Mean Detail Symposium*, **Ohio St. University**, Columbus, OH
Lecturer - "Realism & Abstraction", **City College**, New York, NY
Lecturer/Panelist - *Material Light: Light Material Symposium*, **Yale University**, New Haven, CT
Lecturer/Panelist - *Emerging Brooklyn Architecture* - **Brooklyn Design Festival**, Brooklyn, NY

Exhibitions & Awards

2018 "Debased Flowers" Exhibition, **Area Institute**, AA[n+1] Gallery, Paris, France
"Drawings' Conclusions" Exhibition, **Anyspace**, New York, NY
"Adjacencies" Exhibition, **Yale School of Architecture**, New Haven, CT
"Collapse: Climate, Cities, & Culture" Exhibition, **NYU Gallatin School**, New York, NY
"Digital Craft in Semi-Peripheral Nations" **ACADIA 2018**, Mexico City, MX
"The Drawing Show" Exhibition, **Yale School of Architecture**, New Haven, CT
"Inscriptions" Exhibition, **Harvard GSD**, Cambridge, MA

2017 "Tomorrows" Exhibition, **Onassis Cultural Center**, Athens, Greece
"Drawing Codes" Exhibition, **California College of the Arts**, San Francisco, CA
"Close Reading" Exhibition, **Galleria Tulpenmanic**, Milan Triennale, Milan, Italy
"New New York Icons" Group Exhibition, **Storefront for Art & Architecture**, New York
Design Vanguard Award 2016 - Architectural Record

Publications

2018 Michael Young, "The Projective Drawing" *The Architects Newspaper*, April 2018
Michael Young, "Dead Life", *Artifizi*, Fall 2018
Michael Young, "Mass/Volume Form/Space" in Kyle Miller, et. all. ed. *Possible Mediums*, Actar Publishing, Fall 2018
Michael Young, "Paradigmatic Resolution" *Paprika*, Spring 2018
Daphne Dragona & Panos Dragonas ed., "Tomorrows: Urban Fictions for Possible Futures", *Onassis Cultural Center*, May 2018
Nina Rappaport ed. *Future Real*, Louis I. Kahn Visiting Professor, Yale School of Architecture Books
Pablo Iriarte, "Digital Craft in Semi-Peripheral Nations" **ACADIA 2018**, Mexico City, MX

2017 Michael Young, "The Art of the Plausible and the Aesthetics of Doubt" *LOG 41*, Fall 2017
Michael Young, "The Wasteland Management of the Image Wilderness" *Offramp 13* SCI-Arc, Los Angeles, CA
Michael Young, "Future Myths", *Thresholds* (Cambridge, MA) Fall 2017
Michael Young, "Introductory Period" *Office US Manual*, ed. Eva Franchi Gilibert et. all (Lars Müller: Zurich, Switzerland) Summer 2017
Toshiki Hirano ed. Young & Ayata, "Emerging Architects in USA", *A+U* (Tokyo, Japan) Fall 2017

EDITED FROM 12 pp

ARCH 124A ENVIRONMENTS (FALL SEMESTER) COURSE DESCRIPTION
Professor Elisa Iturbe

Whether it's because of the reconstruction after a natural disaster or because of the need to plan new settlements for climate refugees, the onset of climate change requires a deep questioning of how cities are made and how they function. Some cities will shrink due to rising seas, others will grow dramatically as entire populations migrate and are resettled. In either case, architects must be prepared to rethink the city and acknowledge that in an age of environmental crisis, we will play a crucial role. Because rethinking the city is not a simple task and because this course could never be exhaustive, the aim is not to propose a comprehensive list of solutions, but to give students the tools to think through the problem. The course will attempt to locate the origins of the climate crisis, and focus on the city as a way to both read its history and project a different future.

SCHEDULE:

PART I: CLIMATE CHANGE BASICS

Week 01: Course Intro: Learning How to Die Sept 10

- Topics: Introduction to the framework of the course
- Assignment: Roy Scranton, "Introduction: Coming Home" *Learning to Die in the Anthropocene*. City Light Books: San Francisco, 2015.
Paul Kingsnorth and George Monbiot, "Is there any point in fighting to stave off industrial apocalypse?" *The Guardian*, Aug 17, 2009
Samuel Miller McDonald, "Collapse Despair: Why We Should Talk About the Climate Apocalypse." *Activistlab.org*, Dec 8 2017
- Extra reading: Naomi Klein, *This Changes Everything*. Penguin Books, 2015.
Rob Nixon, *Slow Violence and the Environmentalism of the Poor*. Harvard University Press, 2013.
Kim Stanley Robinson *New York 2140*
Ben Lerner, *10:04*

Week 02: Climate Change Basics: the science and probable outcomes Sept 17

- Topics: Intro to climate science, why climate change is difficult to grasp, what is the relationship between human activity and climate, planetary boundaries, climate models and projections, mitigation vs. adaptation and the obstacles to decarbonization.
- Guest: Samuel Miller-McDonald
- Assignment: Naomi Klein, "Let them Drown: The Violence of Othering in a Warming World." *London Review of Books*, Vol. 38 No. 11, 2 June 2016 pages 11-14 Dale Jamieson: Interview on *Habitations* podcast
"Climate Change and Art: A Lexicon," *The Distance Plan*. thedistanceplanlexicon.org
make sure to activate a New York Public Library card this week in preparation for next week's field trip.
- Extra reading: Dale Jamieson, *Reason in a Dark Time*, Ch 5: "The Frontiers of Ethics"
Joseph Romm, *Climate Change: What Everyone Needs to Know*

Week 03: The Fossil Economy & the Birth of Carbon Modernity Sept 24

- Topics: How our economy came to be based in fossil fuels, the Malthusian-Ricardian

Guest: model, climate change and labor, modernity, the ecological limits of modernity
 Amy Howden-Chapman
 Assignment: Andreas Malm, *Fossil Capital*
 Vaclav Smil, *Energy and Civilization: A History*
 Field Trip: On **Friday, Sept 28**, we will go to the New York Public Library to
 familiarize students with the map collection and the research methods
 available. Orientation will be provided by Ian Fowler at **3:00 pm**

PART II: ENERGY CAPTURE AND THE BIRTH OF CARBON MODERNITY

Week 04: Intro to the City: Phases of Carbon Modernity Oct 01

Topics: The three phases of carbon modernity and their characteristics, industrial
 economy vs. real estate economy, why look at the city.
 Assignment: Manfredo Tafuri, *Architecture & Utopia*
 Pier Vittorio Aureli, "Toward the Archipelago," *Log 11*. Winter 2008. Pg 91-
 119. Sibyl Moholy-Nagy, *The Matrix of Man: An Illustrated History of the Urban*
Environment David Harvey, *Rebel Cities: From the Right to the City to the Urban*
Revolution

Week 05: Phase I: The Modern City (Industrial) Oct 08

Topics: The link between Modernism and industry, urban relationships conceived under
 Modernism. Urban proposals by Le Corbusier, CIAM, Ludwig Hilberseimer
 Pin-up 1A: Industrial NY - Group A
 Reading: Le Corbusier, *The City of Tomorrow and its Planning*
 Le Corbusier, *The Athens Charter*
 Ludwig Hilberseimer, *The New City: Principles of Planning*
 E.G. Burrows & M. Wallace: *Gotham: A History of NYC to 1898*

Week 06: Phase I: The Modern City (Industrial) Oct 15

Pin-up 1B: Industrial NY - Group B

Week 07: Phase II: The Post-Industrial City Oct 22

Topics: The transition from industrial to post-industrial, a very brief history of land
 ownership, the rise of real estate, emergent critiques of Modernism and
 Capitalism: Superstudio, Archizoom, Aldo Rossi, O.M. Ungers
 Pin-up 2A: Post-Industrial NY - Group A
 Reading: H.V. Savitch, *Post Industrial Cities: Politics and Planning in New York, Paris, and London*
 Paolo Portoghesi "Postmodern: the Architecture of the Postindustrial Society"
 Superstudio, "Superstudio." *Perspecta*, 13/14, 1971, pp. 303–315.
 Aldo Rossi, *Architecture of the City*. "Chapter 4: The Evolution of Urban
 Artifacts." Pg 139-163.
 Extra reading: Marie Theres Stauffer, "Utopian Reflections, Reflected Utopias: Urban
 Designs by Archizoom and Superstudio" *AA Files*, No. 47 (Summer 2002),
 pp. 23-36

Week 08: Phase II: The Post-Industrial City Oct 29

Pin-up 2B: Post-Industrial NY - Group B
 Film: *The Florida Project*, by Sean Baker
 (screening details TBD)

Week 09: Phase III: The Late Capitalist City

Nov 05

- Topics: Real estate as an economy unto itself, gentrification, economic and social stratification, special economic zones. Projects *for* the late capitalist city, such as Patrick Schumacher, Rem Koolhaas, Norman Foster. Projects *against* the late capitalist city, such as Pier Vittorio Aureli, Scandinavian Building Companies, etc
- Pin-up 3A: Late Capitalist NY - Group A
- Reading: Neil Brenner, "Neoliberalisation," *Real Estates: Life Without Debt*, Bedford Press, 2015. pg 15-26
Jack Self, "Derivative Architecture," *Real Estates*, pg 81-96 Peter Moskowitz, *How to Kill a City*. Nation Books, 2017.
Kim Moody, *From Welfare State to Real Estate: Regime change in NYC, 1974- Present*
- Extra reading: Felicity Scott, "Involuntary Prisoners of Architecture," *October*, 10/2003, Volume 106, Issue 106.
Keller Easterling, *Extrastatecraft: The Power of Infrastructure Space*. "Zone," pg 25-69.

Week 10: Phase III: The Late Capitalist City

Nov 12

- Pin-up 3B: Late Capitalist NY - Group B

PART III: THE DEATH OF CARBON MODERNITY

Week 11: The new urban unit

Nov 19

- Topics: The tradition of proposing ideal cities in architecture, the urban archipelago, why the commons are important, examples of autonomous settlement units, distributed energy, cooperative ownership
- Pin-up 4: We will divide the class in two – half will bring in research on social configurations throughout history that have specific spatial expressions, such as monasteries, universities, mining towns. Special attention will be paid to the architectural scale and building typologies. The other half will work at the community scale, researching communities that have begun the process of decarbonizing their energy, such as Samsø Island in Denmark, the Brooklyn Microgrid, Greensburg, Kansas. Specific emphasis on communities that, through this effort, have managed to reorient land ownership or labor relationships in some way.
- Reading: Hilberseimer, *The New City: Principles of Planning*
O.M.Ungers, *The Green Archipelago*
De Angelis, Massimo. *Omnia Sunt communia: On the Commons and the Transformation to Postcapitalism*.
Ricoverti, Giovanna. *Nature for Sale: The Commons versus Commodities*. PlutoBooks, 2013.
- Extra reading: Pier Vittorio Aureli, *The Possibility of an Absolute Architecture*
Rem Koolhaas, *Delirious New York*

Week 12: New York Charter: Land & Energy

Nov 26

- Pin-up 05: As students hone in on the idea of a new urban growth unit, this pin-up will focus on identifying alternative land-ownership models and renewable energy generation.
Format and deliverables TBD.

Week 13: New York Charter: Urban Structure

Dec 03

- Pin-up 06: This week's work will focus on how the research from last week can affect urban form. Format and deliverables TBD.

Week 14: Group work session: Compiling the New York Charter

Dec 10

- This week will be dedicated to finalizing the work that will be reviewed on Dec 17.

The final review will consist of students presenting their body of research, as well as a compiled proposal for a post-carbon city. Format and deliverables TBD.

RESEARCH:

Part two of the course will require intensive research. As noted on the schedule, on Friday September 28, there is a mandatory field trip to the New York Public Library in order to familiarize students with the research process at the map collection.

We will meet with Ian Fowler, geospatial librarian and curator of the map collection, who will guide us through the use of the following links:

Digital Collections: <https://digitalcollections.nypl.org/>

Online Catalog: <http://catalog.nypl.org/>

Shared Collections Catalog: <https://www.nypl.org/research/collections/shared-collection-catalog/>

Online version of the old card catalog: <https://catalog.hathitrust.org/Record/101782203>

Fire Insurance Maps: <https://www.nypl.org/collections/nypl-recommendations/guides/fire-topo-property-maps>

Map Warper: <http://maps.nypl.org/warper/>

Space Time Directory: <http://spacetime.nypl.org/> Scoll NYC:
<http://spacetime.nypl.org/scrollnyc/>

***Before the visit to the library, students should make sure to have a library card.
online form is available here: <https://www.nypl.org/library-card>

DRAFT SYLLABUS, EDITED FROM 5 pp. B.6 Environmental Systems, B.9 Building Service System, C.3 Integrative Design

Arch 124B Environments

2 Credits | 2 Hours

Thursdays 12-1:50PM | Room 315F

Professor Yasmin Vobis | yvobis@cooper.edu

ARCHITECTURE: MORE OR LESS CONTAINED

This course introduces students to architectural issues of environments, conceptually, historically and practically. Building on the previous semester, this course will focus on the definition of environments at the scale of the building and its inhabitants. The goal of the course is to situate the building as the shaping of environments that are more or less contained, and as such, as the mediator between people, interior climates, and broader environments.

We will investigate the conceptual approaches to environmental control, and their broader implications on the environment at large. As such, we will consider organization, materiality, tectonics, and building technology alongside their inextricable impacts on energy consumption, resource extraction, pollution, ecology, and vice versa. Economy, optimization, sustainability, cultural relevance, and beauty may surface as issues that come out of this mapping and will provide new ways of seeing and conceiving architecture.

The course will center around a set of close readings of texts and buildings that bring into focus a set of entanglements between the building, technology, and the environment. The impact of the questions of environment, sustainability, and energy on design will be the key focus of the course.

ARCHITECTURAL — TECHNICAL ENTANGLEMENTS

A set of topics for lectures, as well as lenses through which to see architecture.

1. Exposure — Form

Volume, Proportion, Geometry, Siting, Orientation
Energy capture and production

3d model, axon, (site) plans, sections

2. Energy Flows — Boundaries

Passive flows of light, wind, air, heat. Heat sinks and sources.
Envelopes, layers, thresholds, operability, shading devices

Wind and solar maps in relation to drawings of boundaries; CFD analysis

3. Climate Control — Thickness

Active Systems in 3D.
Thickness: plenums, cavities, MEP rooms, shafts, trombe walls.
Integration with structure, light, circulation. Possibility of a super-deep floor plate.

Served vs Servant Spaces (model or drawing)

4. Embodied Energy — Materiality

Embodied energy of materials; sites of extraction
The paradoxical impacts of doing more or less

Durability/ Generic, and Impermanence/ Lightness

Carbon Footprint (+ lifetime analysis, maintenance?)

5. **Method of Construction — Tectonics**

Fabrication, optimization, transportation, waste, and labor and their relationship to tectonics

6. **Program — Energy Ephemera**

Light (artificial, natural, color), sound, heat, and their relationship to use.

Human comfort and what's considered acceptable

COURSE STRUCTURE

The course will alternate between weeks of lectures and reading discussions, and review of student work.

WEEKS A: Lectures, Guest Lectures, Reading Discussions

WEEKS B: Discussion of Critical Case Studies

READINGS

Students will be required to do reading assignments and prepare short responses and an image as the basis for in-class discussion. Readings will include excerpts from the following:

Reyner Banham, *The Architecture of the Well-tempered Environment*

Kiel Moe, *Convergence: An Architectural Agenda for Energy, and Empire State and Building*

G.Z. Brown, *Sun, Wind, and Light*

Abalos & Herreros, *Tower and Office*

Inaki Abalos, *Essays on Thermodynamics, Architecture, and Beauty*

Rem Koolhaas, *Elements of Architecture*. Chapters on Fireplace, Ceiling

John Hix, *The Glass House*

Wolfgang Schivelbusch, *Disenchanted Night*

Rem Koolhaas (lecture), "Sustainability: Advancement vs Apocalypse" at Harvard GSD 2009

Rem Koolhaas, *S,M,L,XL*, "Typical Plan"

Jeannette Kuo, *Space of Production and A-Typical Plan*

Juergen Mayer H., "The Perspiration Affair, or the New National Gallery Between Cold Fronts"

Giovanna Borarsi, Mirko Zardini, *Sorry, Out of Gas: Architecture's Response to the 1973 Oil Crisis*
Willem Boning (podcast), *Attention*
Lydia Kallipoliti, *The Architecture of Closed Worlds, or What is the Power of Shit?*

SYNTHETIC BUILDINGS: CASE STUDIES

Students will work on in-depth analyses of a set of buildings that bring the course's issues into focus. The analysis is to be completed over the course of the semester in small groups and will include in-depth research, analytical drawings that grapple with questions of representation, and writing in order to extract approaches to environmental control. Basic research methods in architecture will be emphasized, as well as how this can form the basis of creative work. The research will culminate in the form of a set of small books, which will be discussed at an open review at the end of the semester.

Buildings that synthesize old archetypes into new architectures.

1. SANAA, Toledo Museum of Glass (reinterpretation of thickness, glass house, big roof)
2. Lacaton & Vassal, University of Arts & Human Sciences Grenoble (2001) or house
3. Herzog & de Meuron, Herb Center at Ricola (context of other ricola projects)
4. Abalos & Herreros, Recycling Plant (1999)
5. Sauerbruch Hutton
6. Waugh Thistleton, Murray Grove
7. Kevin Roche John Dinkeloo, Ford Foundation (1968)
8. Renzo Piano Richard Rogers, Centre Pompidou (1971)
9. Renzo Piano, NY Times Building (2007)
10. Werner Sobek, R128
11. SANAA Rolex (double construction) or Toledo (layers)
12. Renzo Piano, Menil Collection (1986)
13. Tower and Office Example: really deep interior / buerolandschaft
14. Louis Kahn, Kimbell Art Museum (1972) or Richards Medical Research Labs (1978)

EDITED FROM 30 pp. B.1 Pre-Design

ARCH 121 DESIGN II. FALL 2018

Profs. Palacio, del Río*, Zuliani, O'Donnell (Structures I)

EXERCISE 02

STRUCTURAL GYMNASTICS. INHABITING EQUILIBRIUM

Prof. Palacio, Del Río*, Zuliani

-Time: 4 Weeks

In Exercise II the architectonic construct is to be confronted with the complexities of an architectural program that will impact the system as is, challenging its mutability and inevitably provoking a transformation in structure, form, scale and dimension.

In order to explore the friction between what potentially could be conflicting ingredients and their translation into large scale architectural implications students will speculate on different:

- Scales
- Forms of occupation
- Movement

of a given set of programs.

A prescribed series of “types” or “configurations of spaces” will be put in dialog with the System in Equilibrium that will change, growing vertically or horizontally, or both, densifying or opening its structure in order to accommodate the aforementioned figures.

In this process the System in Unstable Equilibrium will mutate into an Architectural Structure capable to respond to the programatic needs.

Constructions will be interrogated for their formal and structural quality as much as for the spatial condition and atmosphere that are capable to produce resulting of the use of materials, relation with light, connection / disconnection with the exterior.

FRICIONAL PROGRAMS

Design is not a spontaneous process, it constantly involves confrontation with a series of predicaments and choices that provoke friction and require transformation in order to overcome them.

Three different but connected programs are to be developed and confronted to the existing System in Unstable Equilibrium:

- Space for Learning
- Space for Training
- Space for Performing

Each of these programatic units have associated architectural archetypes that will be analysed, study and challenged:

- Classroom
- Gymnasium

- Amphitheater

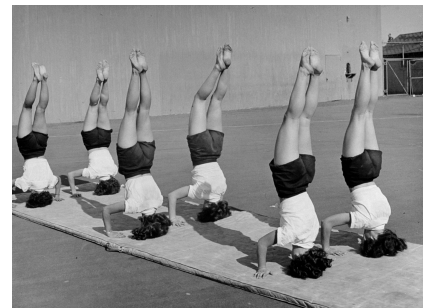
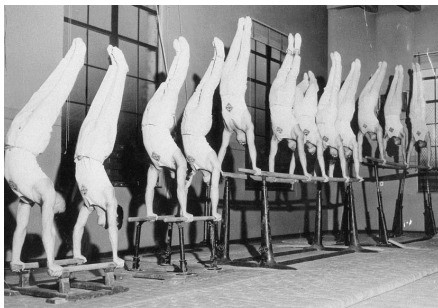
Program will be approach in two different directions that are not opposed but complementary:

- Understanding of the Typology: Program will be analyzed as an evolution of a Type by understanding how the type has developed historically, culturally and conventionally. A series of precedents will be critically studied.
- Discovery of a Phenomena: Program will be analyzed as a series of motions, actions, rituals and experiences that may inform a specific spatial quality that is not pre-determined and therefore can question and re-think the type.

Each of these programatic units will be questioned also terms of:

- Circulation: horizontal / vertical / diagonal;
- Spatial condition: interior / exterior / interstitial / entrance - exit;
- Body status: standing / sitting / laying down;
- Sensory perception: proximity / viewing outside-inside / light - darkness.

The inhabitants will be object of study in their activity, rituals, and spatial needs for their education, training and performance when working alone and in their collective activity.



There will be no specific dimensions given for the three programatic units, nor spatial requirements, but an understanding of the Type and a Discovery on the Phenomena and an interpretation of the movement - activity - ritual that will be reflected on the decision making of crucial aspects of the space:

- Space for Learning: Relation Transmitter - Receiver
 - Space for Training: Relation to the dimensions of the Body - Motion - Spatial Needs
 - Space for Performing: Relation Spectator - Performer
- Connections and relationship between the three Programatic Units are open to interpretation and deploy the potential of interstitial Spaces as spaces for opportunity.
- The new system should accommodate 2 different circulation paths. These paths for moving through the structural construct should be independent and separate from each other.



Students will address Program from different perspectives and in doing so the relationship between Function and Form will be understood historically from Sullivan's "Forms follows Function" and Wright's "Form and Function are one", to the vice versa "Function follow Form" to Scott Brown and Venturi "Structure plus Program result in Form, Beauty is just the by-product" to Koolhaas's "there is no given relationship between Function and Form".

During the three weeks development of Exercise II a series of Readings, Discussions and Round Tables will reinforce the Intellectual Content of the exercise and will gravitate around the debates on:

- Type Vs Program
- Deterministic Vs Open Ended

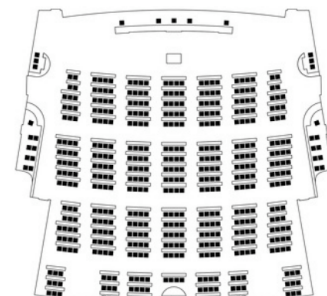
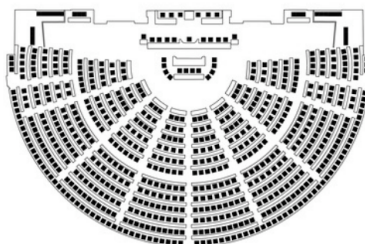
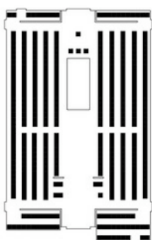
PART I

Analysis and Diagramming of the three Programmatic Components. Type and Precedent.

I WEEK

In order to identify Design Potentials the proposed set of Programs will be studied and analysed through different lenses and illustrated by a series of systematic representations:

- **Typological Study:** Each student will analyze the three archetypes associated with each of the given programmatic units through drawings, diagrams, plans, sections, axonometric...etc, of one precedent of each archetype that will be assigned. Each drawing will go beyond the mere representation of a precedent and will render key information in order to fully understand each precedent's:
 - Circulation: horizontal / vertical / diagonal
 - Spatial condition: interior / exterior / interstitial / entrance - exit
 - Body status: standing / sitting / laying down;
 - Sensory perception: proximity / viewing outside-inside / light - darkness
 - Relation among users: dimensional, sectional, visual



Precedents:

Space for Learning

- Amsterdam Orphanage. Aldo Van Eyck, 1960
- Munkegaard School, Arne Jacobsen 1957
- School in Vila Nova da Barquinha. Aires Mateus 2011

Space for Training

- Paulista Athletic Club. Paulo Mendes da Rocha, 1961
- Maravillas Gymnasium, Alejandro de la Sota 1962
- Bellinzona Bathhouse, Aurelio Galfetti 1970

Space for Performance

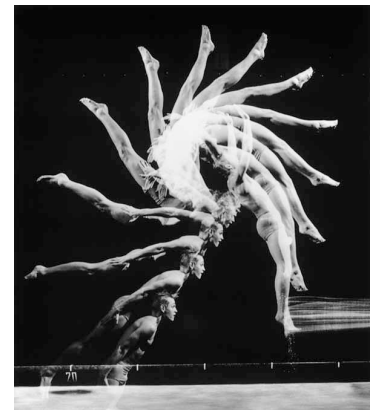
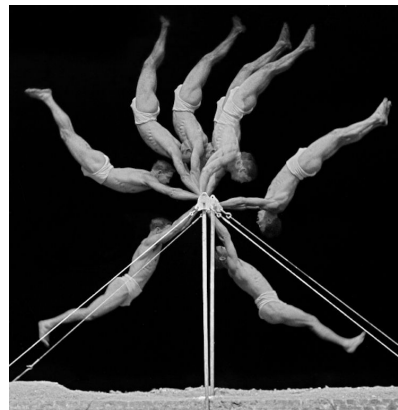
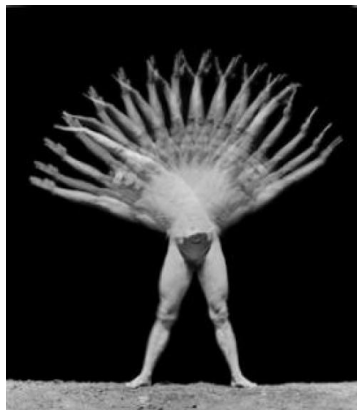
- Olympic Theater Vicenza, Andrea Palladio 1585
- Theatre at the Champs Elysees, August Perret - 1913
- Casa da Musica, Rem Koolhaas - 1999

PART II

I WEEK

Analysis and Diagramming of the three Programmatic Components. Program in Motion.

- **The Body in Motion:** Each student will analyze the different motions, actions, rituals and experiences involved in each of the three programmatic units that may inform a specific spatial quality that is not pre-determined and therefore can question and re-think the type. Through drawings each student will produce non-literal representation of the movements, diagrammatic synthesis of the actions and motion that will better illustrate the spatial requirements of each of these three activities. The drawings will already speculate with the spatial requirements of each program their physical limits, in some cases at the furniture scale that could provide the ideal framework for the action.



Interaction of Bodies, the collective: each of the three programmatic units represent a different relationship among the bodies involved in the action, that could lead to different spatial consequences. How teaching and learning happen could define different configurations of the classroom, the diverse group exercises in a gymnasium determine a series of minimum heights and dimensions needed, the optics of how we see and how we show in a performance result in different theatrical spaces. Students will explore

through drawings the different relationships between the bodies and their different spatial implications, speculation on initial spatial consequences.

Once movement and rituals and the different relationships between the bodies are defined, students will speculate on different ways of constructing physical boundaries around the discovered space of action of the different forms: individuals or groups.

Constrain space, at the body scale, can be the result of containing the individual space of performing, training, or practicing. Large span structures or high spaces can be the result of the collective spaces.

***All Drawings will be formatted in 24"x24" or modular format (24"x 12", 24"x48".)**

***Other media than drawings can be used, photograph, collage, mix media, etc.**

***Scale of representation will be decided case by case, using in some cases multiple scales.**

PART III

In this third part of Exercise II The System in Unstable Equilibrium will be further develop in order to accommodate the previously analyzed set of programmatic componens

- Space for Learning
- Space for Training
- Space for Performing

- This process will imply transformations in structure, form, scale and dimension, that will be tested out by systematic operations that could lead to the system growing vertically, horizontally or diagonally and mutating its structural rhythm and type. This transformation will happen iteratively through drawings and models that will become not representational but transformative tools.

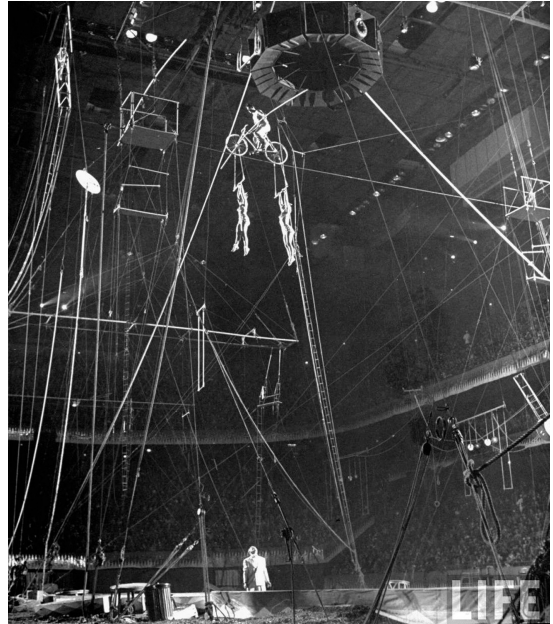
- Drawing of the System of Unstable Equilibrium as is:

- Drawing Transformations of the original System in search of Accommodating the three Programatic Units analyzed in Part I and Part II (See transformation Conditions below):

- Testing Equilibrium in the transformed Architectural Structure

The new Architectural Structure will be further transformed, refined and interrogated according to the following Transformation Conditions:

- **Circulation:** the new system should accommodate 2 different circulation paths. These paths for moving through the structural construct should be independent and separate from each other and will represent conceptually two conditions: Public and Private. Each Circulation Path should include a combination of horizontal, vertical and diagonal movement.
- **Program:** The system will be transformed to accommodate spaces for learning, training and performing. These spaces should consider issues of privacy and accessibility in relationship to circulation. Spaces for learning, training and performing should provide the option of being combined into one. This further refinement of the program will produce new connections and relationships between the three main activities taking place in the structure deploying the potential of interstitial spaces as spaces for opportunity.



- **Spatial condition:** despite the lack of enclosure the structure system is already defining different spatial conditions that should be now identified as interior - exterior - interstitial - entrance-exit. In integration with the circulatory system explored previously potentialities for open and enclosed spaces will be speculated.
- **Body status:** the structure is now given a specific scale, that will allow to identify the relation between the different spaces to the human body. Different datums for standing / sitting / laying down will be discovered.
- **Sensory perception:** the new structure will be also questioned and transformed in terms of producing intended spatial situations that deal with proximity - viewing outside-inside - light and darkness. The Structure will be interrogated from inside out as much as from outside in. Considerations of materiality, light, and spatial sequence will produce an intentional atmosphere that will define the tectonics of the new architectural structure.

EXERCISE 03: Permanent Contemporary Circus Conservatory.

In Exercise 01 students have been pursuing an apparent Unstable Equilibrium dealing with gravity, different structural types, and reflecting on the capacity to shape the perception of stability, gravity, weight and lightness. Circus of all times and locations have been challenging equilibrium and perception to entertain generations and generations of kids all over the world. But traditional Circus is now obsolete and a new genre of performing art inspired in it is transforming our idea of the Circus. The traditional circular tent that has shaped the space of performance for this type of spectacle is also obsolete, specially when Contemporary Circus explore other ways of performing in which the relationship with the public is not linear but interactive or immersive. Site Specific Theater, Promenade Plays, Environmental Performances and Immersive Experiences challenge the relationship between performers and the spectators and therefore should result in a different formalization of the Space for Performance.

In Exercise 03 students will define a new space for a Contemporary Circus and Conservatory where public performances and education will take place in an urban context in New York City.

In order to define a new typology for a Permanent Contemporary Circus, and an Educational Space for developing circus skills, students will thoroughly study each of the components of the performance and their way of perform, train, practice, teach, study and relax. Equilibrists, Acrobats, Dancers, Actors, Jugglers, Magicians, Illusionists, Unicyclists... will be object of study in their art, rituals, and spatial needs for their education and realization.

Program will be approach in two different directions that are not opposed but complementary:

- Understanding the history of an obsolete Typology that needs to be updated: Program will be analyzed as an evolution of a Type by understanding how the type has developed historically, culturally and conventionally.
- Discovery of a Phenomena: Program will be analyzed as a series of actions and experiences that may inform a specific spatial quality that is not pre-determined and therefore can question and re-think the type. Phenomena and Design research will be the basis for the discovery of the Program.

Therefore addressing program won't be exclusively a problem-solving question organizing pre-defined categories, but also an understanding of the different ways in which we come across phenomena of the senses while performing an activity throughout the space.

Across Programmatic Synergies

Again program will be addressed in two different ways. Firstly as a thorough study of each of the characters that compound a Contemporary Circus and their ways of perform, train, practice, teach, study and relax first as INDIVIDUALS and then as GROUPS. Equilibrists, Acrobats, Dancers, Actors, Jugglers, Magicians, Illusionists, Unicyclists... will be object of study in their art, rituals, and spatial needs for their education and realisation when working alone firstly and secondly in their collective form. Similarly to the programmatic investigation developed in Exercise 02, students will refine their understanding of program and the relationship with space.

Secondly students will analyze what we will call "the Brief": a list of minimum requirements and their dimensions, in order to understand a series of hierarchical conditions and their dimensional relationships. The brief will be taken as an **indicative set of programatic units** and their size, that **should not be literally taken as a list of spaces**. The final program will be unique as for each student's interpretation and should be capable to admit interpretations, hybridizations, overlaps, and in-betweens of the listed programatic components of the brief.

On site. Performing the Unstable Equilibrium

In this Third exercise students will further adapt the formal discoveries derived from the thorough program study to their previous tectonic explorations of Exercise 01 and 02 considering a specific Brief that will evolve to a Program, Context and Site and the different systems involved in the architectural construction:

Outline Brief for a Permanent Contemporary Circus Conservatory

0.- Public Space: Exterior open area for public use.

1.-Entry: 6000sqf

- Threshold: Transition Outside - Inside
- Public Entry
- Welcome area. Information
- Cafe (Kitchen+Seating area)
- Restrooms
- Back Entry. Service. Loading area

2.-Performance Space: 8000sqf

- Stage
- Seating area for 550 people
- Restrooms

3.-Training Center 8000sqf

- Training Rooms: Individual Practice / Group Practice
- Physical Therapy
- Restrooms/Lockers
- Lounge
- Dinning Area – Kitchen

4.-Study Center 8000sqf

- Classrooms /Seminar Room
- Library
- Media Center
- Student Services - Administration
- Restrooms
- Lounge

5.-Circulation 6000sqf

- Vertical, Horizontal and Diagonal
- Public (To serve Performance Space)
- Private (To serve Training and Study Center)

TOTAL 36.000 sqft

OTHER ACTIVITIES

Throughout the semester a series of Readings, Discussions and Round Tables will reinforce the Intellectual Content of the course and will gravitate around debates on:

- Structural Investigation Vs Form Finding
- Type Vs Program
- Deterministic Vs Open Ended
- New types of Performances Vs New Spaces for Performance
- **Thursday Sep 13th; Julian Palacio: Structure as Spatial Generator. Presentation ROOM 315**

- Thursday Sep 18th . Angel García de Posada: Transfers. Presentation ROOM 315
- Tuesday Sep 25th Guido Zuliani: Type, Typology, Program. Presentation ROOM 315
- Thursday Oct 9th. Adam Frampton. A debate on Contemporary Approaches to Program. Presentation ROOM 315
- Thursday Oct 18th Lorena del Río. Inhabiting the Structure. Presentation ROOM 315
- Wednesday Oct 24th. Kyle Decamp. performance and Space. Presentation ROOM 315
- Tuesday Oct 30th Val Warke. The Carnival Theatre. Presentation ROOM 315
- Wednesday Oct 31st. Oscar Olivier-Didier. The Bronx, a Landscape. Presentation ROOM 315

EDITED FROM 13 pp. B.1 Pre-Design, C.3 Integrative Design

MUSEUM | TYPE, PROGRAM, EPISTEME

ARCH 141A Design IV Fall 2018

The Cooper Union | Irwin S. Chanin School of Architecture

Stephen Rustow | rustow@cooper.edu

This studio proposes to explore the museum as an architectural type, as a cultural program, and as a systematic means for understanding art.

The museum of art first emerges as an architectural problem in Europe at the end of the 18th century. Although many aspects of the modern art museum have antecedents in other kinds of buildings, the particular combination of programmatic activities in a cultural institution intended for a public audience was ultimately quite different from previous ways of collecting and displaying art. The museum proposed a new way of looking; creating an appropriate architecture for this problem led to much theoretical speculation and formal experimentation, gradually producing a new architectural typology that became a model for museum buildings well into the 20th century.

With the opening of the Centre Pompidou (Musée Beaubourg) in 1977, museum architecture assumed an unprecedented prominence in the public eye; in the four decades since, the architectural project has become integral to the museum's institutional identity. Hundreds of new museum projects have been built around the world and countless new museums have been created, even in parts of the world where museums had not previously been the traditional means of presenting art. There has never been a moment when museum architecture has had a wider and more significant cultural presence.

Yet in that same forty year period the authority of the museum as the privileged site for displaying art has been challenged by a variety of new settings: commercial galleries, kunsthallen and art fairs, auction houses, have all called into question the museum's exclusive claim on the presentation of art. New artistic and curatorial practices – from earthworks and other site-specific art in remote landscapes to short-term installations in urban public spaces – have further shaken the museum's primacy. And with the emergence of digital forms of artistic practice, the very notion of a unique work of art destined for a single privileged curatorial setting has been fatally undermined.

Museums have adapted by transforming themselves into cultural centers with a much more varied set of interests and offerings than the traditional program of collection, conservation and display. Educational courses, performances, diverse entertainments and vast merchandising franchises now compete with conventional exhibitions in museum schedules and attendance numbers have become the sole measure of success. Indeed, the actual engagement of the public with works of art often seems a secondary goal to simply attracting the largest possible crowd to the space of the museum itself. And, with websites, on-line archives, digital collections and an aggressive presence on social media, the museum's 'space' is now virtual as well as real. Yet, at least in theory, the act of looking directly at works of art remains central to the experience of visiting the museum, even as there is less and less agreement about what that experience should be.

Museum as Type: Movement, Support, Light, Context(s)

Among the essential typological aspects of the museum are movement, support, light and the creation of highly specific contexts for looking. The museum type also has a very particular relationship to the city.

The museum as structured movement:

Museums are unique among cultural institutions in that the confrontation with art depends on the viewer's movement through space. Whereas theaters, concert halls and cinemas all typically impose a fixed relationship with the stage or screen on a stationary viewer, to see art in a museum you must move. Accordingly, each visitor constructs a set of connections in time and space that influence both what she sees and the order in which she sees it. This movement or perambulation may be directed by curatorial intentions or may simply depend on the interest and whim of the viewer. The resulting tension – between structure and serendipity, intention and improvisation – is central to the museum-going experience and whatever meaning we take from our encounter with art there is determined by it.

The museum as an array of supports:

In a museum, viewing a work of art takes place in a limited space that is defined by the surfaces and materials that physically support the work. These may be conventional walls or free-standing partitions for two-dimensional works like paintings and drawings or a variety of bases and pedestals, or the floor, for three-dimensional sculpture. But there are many other kinds of supports – screens, scrim and specially constructed containers, from small vitrines to entire rooms, that are designed and built to present specific works of art. Historically, a broad consensus has emerged on privileged ways of showing different kinds of media and the idea that there are 'appropriate' supports for each kind of art; at the same time, it has long been clear that challenging these conventions can help us see works of art in important new ways.

The museum as a machine for modulating light:

Light is critical in understanding visual art and having enough of it, and the 'right kind', is essential to perceiving color, line, form and texture. Different kinds of art require different kinds of light (and some art makes its own light and depends on darkness). The light in museums can be 'natural', i.e. connected to the environment beyond the gallery, or 'artificial', i.e. entirely generated within the space of presentation. But all light in museums, whatever its source, needs to be controlled throughout the day and over the course of the year. And given the variety of lighting levels and spatial settings, the transitions between differently lit spaces create a second set of lighting challenges that must also be anticipated and controlled.

The museum as a landscape of shifting contexts:

The encounter with the work of art in a museum is never an isolated moment, indeed the museum forces us to see works of art with, and in terms of, other works of art. Put differently, the museum juxtaposes works of art and in so doing creates a specific context for our looking at them. How these juxtapositions are structured is the essence of the museological endeavor: art may be displayed in a wide variety of classificatory 'frames', by artist, by nationality, by subject, by media, by historical period or artistic movement, etc. Each frame in which the work is presented influences and alters our understanding of its meaning. Yet each work also embodies individual qualities that create its unique 'aura'.

The museum as a symbol in the urban setting:

For a variety of historical reasons most art museums are located in cities. As urban cultural institutions museums have a representational role to play in the city, explicitly declaring both their public nature and their 'cultural values' in the public realm. Moreover, museums have often become a major determinant in urban development and there have been many attempts, from 19th c.

Philadelphia and Washington to 20th c. Paris and Bilbao, to use museum programs explicitly to 'transform' or 'rehabilitate' urban settings. The museum's meaning as a symbol is thus integral to its urban function and expressing that function is, at least in part, the responsibility of architecture.

COURSE OUTLINE

The semester will be structured around five exercises of varying length, culminating in an approximately 2-month design effort.

- 1 Documentation:** An observation exercise, drawing existing museum spaces in NYC, focusing on scale, volume, sequence and connections, materials and light. The resulting documentation will be a cumulative resource for the studio.
- 2 Art | Gallery:** An exercise that will analyze the gallery in terms of its spatial qualities, material supports and lighting; how does the gallery 'show' and the what space is 'appropriate' to different kinds of art. The exercise will then be expanded to consider how the single gallery as a spatial unit can be multiplied and combined to produce repetition and variation, spatial sequence and composite volumes of increasing complexity. Flexibility vs. specificity and adaptability over time are related themes.
- 3 Museum | Program:** An exploration of the typically unseen realm of spaces that support the gallery: the importance of environmental controls; movement of art and movement of the public; storage and exhibition preparation; etc.
- 4 Museum | City:** The physical and symbolic presence of the museum in the city; how and what museums 'represent' in the public realm; what aspects of their architecture have urban meaning and why; the museum's influence on urban development.
- 5 Design Problem:** Development and representation of a full project for a mid-sized museum on a local site.

LECTURES

A set of shared lectures for both sections of Studio IV will be organized throughout the semester to emphasize the larger commonalities between the distinct design problems of the two sections.

Topics may include:

Type
Program
Structure & Envelope
Light
Flexibility

COURSE OBJECTIVES

Design IV investigates urban programs and sites requiring the integration of form, structure and space.

Our goals include:

- To explore and synthesize organizational, technical, material, representational, contextual, social and disciplinary problems through a specific design problem
- To speculate on architecture's role in shaping an urban context
- To establish a position through an architecture
- To leverage the community of the studio for focused discussions and research

COURSE SCHEDULE

| | | |
|---------|---|--|
| Week 01 | Tuesday, Sept 4 Wednesday Sept 5 Thursday, Sept 6 | Studio Introduction; Project 1 Assigned: Museum Documentation Crits Worksession |
| Week 02 | Tuesday, Sept 11 Wednesday, Sept 12 Thursday, Sept 13 | Crits Worksession Project 1 Review; Project 2 Assigned: Art Gallery |
| Week 03 | Tuesday, Sept 18 Wednesday, Sept 19 Thursday, Sept 20 | Crits Worksession nCrits |
| Week 04 | Tuesday, Sept 25 Wednesday, Sept 26 Thursday, Sept 27 | Pinup; expand project 2 to Gallery Multiples Worksession Crits |
| Week 05 | Tuesday, Oct 2 Wednesday, Oct 3 Thursday, Oct 4 | Crits Worksession Project 2 Review; Project 3 Assigned: Museum Program |
| Week 06 | Tuesday, Oct 9 Wednesday, Oct 10 Thursday, Oct 11 | Pinup Worksession n Crits |
| Week 07 | Tuesday, Oct 16 Wednesday, Oct 17 Thursday, Oct 18 | Project 3 Review; Project 4 Assigned: Museum City Site Visit Worksession |
| Week 08 | Tuesday, Oct 23 Wednesday, Oct 24 Thursday, Oct 25 | Crits Project 4 Review; Project 5 Assigned: Design Problem |
| Week 11 | Tuesday, Nov 13 Wednesday, Nov 14 Thursday, Nov 15 | Project 5 Interim Review |
| Week 14 | Tuesday, Dec 4 Wednesday, Dec 5 Thursday, Dec 6 | Pre-final Pinup |
| Week 15 | Thursday, Dec 11 | Final Review |

TOWARDS A SOFT THEATER

ARCH 141 A FALL 2018
PROFESSOR YASMIN VOBIS
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THE SOCIAL THEATER

“The auditorium that the eighteenth century inherited from the baroque theater was more of a social, festive centre than a true auditorium. The audience gathered there not to concentrate on what was happening on the stage but to participate in a double production. The performance on stage was matched by one put on by the audience... Everything was a game of entanglement and resolution.” Wolfgang Schivelbusch, *Disenchanted Night: The Industrialization of Light in the Nineteenth Century*

Performance is an art where production and reception are collapsed, charging the physical space of the theater with the potential for exchange. In the above passage, Wolfgang Schivelbusch takes us back to seventeenth century opera, a time when the audience was as evenly illuminated as the stage, encouraging the theater to function as a boisterous living room. Our experience in today's theaters is different. Their hushed, darkened rooms use architectural and social codes to produce an intense focus; but in turn, they no longer surprise and incite participation, and instead induce a state of common drowsiness. Sleepiness aside, the one-directional delivery of culture appears incongruous with a moment when audiences are eager to participate in its production.

Architecture has been complicit in this transformation. The move from outside to inside, the change from multiple to a single stage, the gradual darkening of the auditorium, the hardening of the line between audience and performer, and the search for total control—visually and acoustically—have suppressed the social dimension, and have produced a homogenized landscape of “typical” theaters, drained of any sense of urbanism.

This homogenization of experience is even more remarkable when one considers the long and experimental history of theater design. Mies van der Rohe's vision for the National Theater in Mannheim provides a stark counterexample:

“I came to the conclusion that the best way to enclose this complicated spatial organism was to cover it with a huge column-free hall of steel and colored glass or, to express it differently, to place this whole theater organism inside such a hall.”

Mies van der Rohe on his Mannheim National Theater competition entry, 1952-3

Mies' unbuilt project—considered a dead end—nevertheless identified a desire to unpack the space of the theater and to connect it to the city by giving it a new materiality and organization. Mannheim now appears newly relevant as contemporary theaters must balance the desire for an immersive, controlled, and intimate experience, with the need to connect it to the unruly public realm, its lifeblood. The connection to the city is especially vital today, as institutions face pressing questions about broader access and the inclusion of more diverse audiences. However, the opportunities are also more fundamental than this, as connecting performance to urban life has the capacity to charge the everyday with art, and vice versa: to infuse art with the everyday.

THE CASE FOR SOFTNESS

In this studio we will consider theaters as architectural, cultural, and civic constructs. In order to question the basic underlying structure of these aforementioned dark boxes, we will take a leap of faith and explore more

fully a latent quality that exists in theaters: softness. Softness has historically held a supporting role in theaters, being relegated to sets, curtains, and costumes, to provide a limited flexibility and momentary impermanence. But if we are to take Gottfried Semper's musings on textile walls seriously, we may start to think about ways that softness can challenge our assumptions about theaters: not so much as well-oiled machines for the production of specific and predictable effects, but as soft, flexible, permeable organisms within the city that embrace some level of uncertainty.

Softness as an architectural concept radically undermines our basic assumptions about permanence and solidity in architecture and brings up questions of how much control we can assert and how much we give up when

we embrace indeterminacy. More specifically, softness can implicate otherwise unusable, floppy, lightweight materials in architecture; soft programming allows structures to be more receptive to multiple, overlapping uses and unpredictable futures; and soft boundaries can create a more permeable relationship to context and welcome new participants. Aside from forging resilient and flexible structures, softness can also give rise to a new, unexpected architectural pleasures and beauty. We will explore multiple modes of softness in this studio – material, structural, programmatic and representational – in order to tease out its disciplinary challenges and opportunities.

Rather than throwing our hands up in the air and taking softness as an unwillingness to commit, we will insist on softness as an integral part of architectural production, and therefore, a part of delineating precise, meaningful forms and spaces for people. Together, we will walk a tight line between questions of control and lack of control in design, defining degrees of uncertainty in search of a disciplinary, assertive idea of the soft.

COURSE OUTLINE

The studio begins with a set of focused experiments that explore the potentials of softness, as well as introduce students to the history of theaters to produce a shared, critical context. In the second part of the semester students will work through the implications of the early explorations with the design of a flexible theater in an urban context.

- 1** **Soft Structures**
Research on soft structure precedents and material experimentations with fabric.
- 2** **Soft Drawings**
Photogrammetry explorations of existing theaters around New York.
- 3** **Soft Programs**
Research on the organization of experimental theaters and the design of an auditorium prototype by organizing the relationships between actors, audience, and city.
- 4** **Soft City**
Site visit, and design studies that address the opportunities and challenges of the context.
- 5** **Soft Theater**
Sited design proposal and development

LECTURES

A set of shared lectures for Design IV students will be coordinated throughout the semester to instigate dialogue across the two sections. Topics may deal with shared concerns around:

Program
Flexibility
Structure
Type
Light

In addition to attending all classes and reviews, students are expected to participate in the intellectual life of the school. Attendance at department lectures, exhibitions, and other events, is strongly suggested. Asking questions and bringing ideas from outside the studio into projects and classroom discussion is encouraged and expected.

COURSE OBJECTIVES

Design IV investigates urban programs and sites requiring the integration of form, structure and space. Our goals include:

-To explore and synthesize organizational, technical, material, representational, urban, social, and disciplinary problems to develop architecture

-To speculate on architecture's role in shaping an urban context

-To establish position through an architecture

-To leverage the community of the studio for discussions and research

COURSE SCHEDULE

| | | |
|--------|---|--|
| Week 1 | Tuesday, Sept 4 Wednesday Sept 5 Thursday, Sept 6 | Studio Introduction. Project 1 Assigned: Soft Structures Crits Worksession |
| Week 2 | Tuesday, Sept 11 Wednesday, Sept 12 Thursday, Sept 13 | PinuC rits Worksession |
| Week 3 | Tuesday, Sept 18 Wednesday, Sept 19 Thursday, Sept 20 | Project 1 Review. Project 2 Assigned: Soft Drawings Crits Worksession |
| Week 4 | Tuesday, Sept 25 Wednesday, Sept 26 Thursday, Sept 27 | Pinup Crits Worksession |
| Week 5 | Tuesday, Oct 2 Wednesday, Oct 3 Thursday, Oct 4 | Project 2 Review. Project 3 Assigned: Soft Programs Crits Worksession |
| Week 6 | Tuesday, Oct 9 Wednesday, Oct 10 Thursday, Oct 11 | Pinup Crits Worksession |

| | | |
|---------|--|--|
| Week 7 | Tuesday, Oct 16 Wednesday, Oct 17 Thursday, Oct 18 | Project 3 Review. Project 4 Assigned: Soft City Site Visit Worksession |
| Week 8 | Tuesday, Oct 23 Wednesday, Oct 24 Thursday, Oct 25 | Crits Project 4 Review. Project 5 Assigned: Soft Theater Worksession |
| Week 9 | Tuesday, Oct 30 Wednesday, Oct 31 Thursday, Nov 1 | CritC rit Worksession |
| Week 10 | Tuesday, Nov 6 Wednesday, Nov 7 Thursday, Nov 8 | PinuC rits Worksession |
| Week 11 | Tuesday, Nov 13 Wednesday, Nov 14 Thursday, Nov 15 | Project 5 Interim Review Crits Project 5 Interim Review |
| Week 12 | Tuesday, Nov 20 Wednesday, Nov 21 | Crits No class - Friday Schedule |
| Week 13 | Tuesday, Nov 27 Wednesday, Nov 28 Thursday, Nov 29 | CritC rit Worksession |
| Week 14 | Tuesday, Dec 4 Wednesday, Dec 5 Thursday, Dec 6 | Crits Pre-final Pinup Worksession |
| Week 15 | Tuesday, Dec 11 Thursday, Dec 13 | Crits Final Review |

(Projects 1 and 2 not included here)

PROJECT 3 SOFTPROGRAM

We will couple our soft spatial frameworks with ideas of soft program to develop approaches to flexibility in the 21st century theater. Flexibility in architecture came to the fore in the mid twentieth century as a reaction to the strict interpretations of functionalism. With concepts like 'universal space,' it became an especially useful term in addressing the indeterminacy inherent in designing for an evolving definition of the public. But many other models for flexible, open public structures have emerged as well that have questioned this neutrality, and we will study a number of theater precedents as models for dealing with flexibility in a context that both demands and resists it.

Theaters are one of the oldest programs for architects, and the mountains of historical evidence can overwhelm. But to reinvent the theater we will also need to approach the problem afresh with a necessary naïveté. We will start with simple observations about the organization of existing theater models and consider how to fundamentally redraw these. We will examine the potentials of type, as well as its limitations, and when productive to import ideas from other types to reframe the experience of performance as a whole. As such, we will investigate the multiple definitions of building type, including in terms of use (program) and form (morphology).

SCHEDULE

| | | |
|--------|--|--|
| Week 5 | Wednesday, Oct 3 Thursday, Oct 4 | Project3Assigned.GroupDiscussion Worksession |
| Week 6 | Tuesday, Oct 9 Wednesday, Oct 10 Thursday, Oct 11 | Group critique Crits Worksession |
| Week 7 | Tuesday, Oct 16 Wednesday, Oct 17 Thursday, Oct 18 | Project 3 Review Site Visit Worksession |

3A. PAMPHLETS: THEATER PRECEDENTS

We will continue to create a shared critical context for working with the theater type through precedent pamphlets. Choose two of the below precedents and create a concise pamphlet for each, documenting and analyzing the project. What is the relationship between spectators, performers, and the city?

Pamphlets should include photographs, drawings and a short text. Print and fold 10 copies of your pamphlets for everyone to add to their reference shelf at their desk.

Theater Precedents

- Walter Gropius, Total Theater
- Lina Bo Bardi, Teatro Oficina
- Herzog & de Meuron, Elbphilharmonie Hamburg
- OMA, Casa da Musica
- OMA/REX, Wyly Theater
- Smiljan Radić, Teatro Regional del Bío Bío
- Atelier Bow-Wow, BMW Guggenheim Lab
- Andrea Palladio, Teatro Olimpico
- Aldo Rossi, Teatro del Mondo
- SANAA, Schouwburg Almere
- Jean Prouve, Maison du Peuple de Clichy
- Diller + Scofidio, Moving Target, Granoff Center
- Eduardo Souto de Moura, Santa Casa da Misericórdia Auditorium, Auditorium A
- Shakespeare, Globe Theater
- Mansilla + Tuñón, León Auditorium
- Ludwig Mies van der Rohe, National Theater at Mannheim
- Heinrich Tessenow, Festspielhaus Hellerau
- Sebastiano Serlio, theater design.

3B. SOFT THEATER PROTOTYPE

In this design charrette, you will design an experimental theater space by combining two performance types and organizing the relationship between performance, audience, and city. You will use two programs from the list below and design a flexible theater with 200 seats that accommodates both:

DANCE
THEATER
MUSIC
FILM
DISCUSSION

Choose a specific performance for each to help you think about how to precisely frame that particular medium. Select unusual cases to study how your ideas of flexibility can accommodate extremes, as well as challenge preconceptions about each of the types. Identify the specific requirements of each medium you have chosen, paying special attention to the geometry of sightlines, acoustics, movement and overall experience.

What are the differences between the two programs and where can they intersect?
What are your architectural strategies for creating flexibility?

Begin by diagramming a number of possible relationships, working three-dimensionally, and not in plan or section exclusively. Then construct a physical model that is a three-dimensional diagram: a set of ghosted volumes in space that model the performer-spectator-city relationships. These volumes may be minimally defined, or structured by a scaffold, that may or may not push back into the space of performance.

Incorporate ideas from your first two projects. These may be ideas about surface and structure, ornament, organization, transformation, symmetry, sequence, etc. Consider the lineage of the body of work you are developing; what have you identified as productive, or do your ideas stem from a critique of existing models?

DELIVERABLES

- **Physical Model.** Ghosted diagram of spatial relationships
Scale: 1/8" = 1'-0"
- **Plan(s) and Section(s):** showing seating, areas of movement and spectacle, connections to the city, structure.
Scale: 1/8" = 1'-0"
- **Axometric**
- **Diagrams:** exploring use and configurations, and other critical relationships you have identified

You will be designing a new building that houses experimental theaters which can attract audiences from both the greater New York area and the residents of Red Hook. As a space for art, expression, and exchange, this new institution should foster the creative potential of the community and be flexible enough to allow for active use on a daily basis.

The attached Space Program should be seen as an early guideline, rather than a fixed set of spaces to be accommodated; you are expected to push back against the space program in a reasoned way. It will be up to you to hybridize programs, prioritize, and shift emphasis based on your working ideas about an institution that does not yet exist. You will leverage your architectural concepts to help define this new institution. As such, you will develop your own thesis on contemporary theaters through your architecture.

Performance Spaces

Red Hook Soft Theater will include two auditoria, one large and one small. Each may be biased towards a specific type of performance (such as music, theater, dance, poetry, film, community meetings), while being flexible enough to allow other types. While both of these auditoria will require lighting and acoustical control, they may have the ability to be connected to each other, or other programs such as the lobby, or plaza at times, depending on your thesis on flexibility.

(As has been mentioned before, the move from outside to inside, the change from multiple to a single stage, the gradual darkening of the auditorium, the hardening of the line between audience and performer, and the search for total control – visually and acoustically – have suppressed the social dimension of current theaters, and have produced a homogenized landscape of “typical” theaters, drained of any sense of urbanism. This studio is a search for new models of theater that go beyond the typical dark box auditorium with its one-directional delivery of culture. As such, a contemporary theater must balance the desire for an immersive, controlled, and intimate experience, with the need to connect it to the unruly public realm, its lifeblood.)

Community Space

You will appropriate or invent a program of your choice that anchors the cultural institution in its context by providing a crucial service or amenity for the community. In addition to the café and plaza, this program serves to activate the site on an everyday basis, even when performances are not happening. This program has the potential to welcome and invite people from the neighborhood who would normally not attend an “art event,” and therefore broaden the audience of the institution, as well as foster future artists. What you choose to be a community space will help you develop your definition for this institution.

Circulation

Consider the public sequence from the street, to entry, and to the performance spaces, as well as that of the performers and staff that work there. Likewise, consider the movement of materials from the street loading area to the workshops and to the stage. In addition, you must provide two means of egress from any public space in the building on all levels. One of these egress paths may exit through the lobby; the other egress path must exit directly to the street. In addition, you must provide accessibility to upper levels via an elevator or accessible ramps.

Site

33% of the site (1600 sm) at ground level must be left unbuilt and uncovered (except for thin bridges): to be used as public plaza(s) or space(s) for informal performances and public assembly. Therefore, your building footprint should be no more than 3200 sm max at ground level.

SPACE PROGRAM

| | PROGRAM | NOTES | AREA (SM) |
|---------------------------|-------------------------|--|-------------|
| SITE AREA | | | 4800 |
| PUBLIC PLAZA | | 33% of site reserved for open space(s) | 1600 |
| BUILDING FOOTPRINT | | | 3200 |
| Auditoria | | | 1200 |
| | Large Auditorium | For min. 600 people. Fixed Seats, Stage, Backstage | |
| | Small Auditorium | For min. 200 people | |
| Visitor Services | | | 1350 |
| | Lobby | Includes information and ticketing | 500 |
| | Lockers | To store bags and coats | 20 |
| | Café / Bar | Open all day and easily accessible | 200 |
| | WC - Visitors | 4 @ 20 | 80 |
| | Classroom | For community workshops and education. 25 people | 40 |
| | Recording Studio | A resource for the community | 10 |
| | Community Space | To be determined by each student | 500 |
| Support Spaces | | | 910 |
| Performers | Rehearsal Studio | | 100 |
| | Workshops and Storage | For costumes and scenes | 300 |
| | Green Room | Adjacent to stage of large auditorium | 40 |
| | Dressing Rooms, Showers | 2 @ 50 | 100 |
| | WC - Performers | 2 @ 20 | 40 |
| | Break Area | Shared by Staff and Performers | 30 |
| Admin | Administrative Offices | Open Plan - 10 desks and reception. Daylight desirable | 100 |
| | Meeting Rooms | 3 @ 20 | 60 |
| | WC - Staff | 2 @ 20 | 40 |
| Service | Loading Area | | 100 |
| Building Mechanics | Mechanical Room | | 400 |
| Total Net Area | | | 3860 |
| Grossing Factor | | | 1.3 |
| Total Built Area | | | 5000 |

B.9 Building Service Systems, C.3 Integrative Design

ARC 134 - Environmental Technologies
Fall 2017 and Spring 2018

Professor: Ashok Raiji

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ashok.raiji@arup.com (Emergencies
only)

Text: Mechanical and Electrical Equipment for Buildings, 12th
Edition Walter Grondzik, Alison Kwok, Benjamin Stein &
John S. Reynolds John Wiley & Sons (Publisher)

This course will introduce concepts and the design of engineering systems in buildings. These include heating, ventilating and air-conditioning (HVAC), electrical, lighting, plumbing, life safety systems and vertical transportation systems. The underlying theme will be

- To understand the impact that building systems have on the architecture of buildings, and conversely the impact that architecture (form, orientation, exterior envelope, layout, etc.) has on building services systems, energy and natural resource usage and ultimately, the environment.
- To demonstrate that design is an activity that does not occur singularly, but takes place in a completely integrated process in which architects, structural engineers, mechanical and electrical engineers participate in a collaborative manner.
- How can buildings be designed, constructed and operated so that they are sustainable?

Fall 2017

We will examine the context for building systems design, with a focus on energy, site, climate and comfort, and materials. We will study building facades, arguably one of the most important components of a building.

We will discuss “Sustainability” as it applies to the design of the built environment, why we need to be sustainable and what is/needs to be done to be responsible in design.

The fundamentals of heat flow in buildings will be presented along with a commentary on techniques to mitigate the adverse effects of heat flow. Calculations methods for heating and cooling, as well as basic psychrometrics will be covered.

Commonly used heating and cooling systems in both large and small buildings will be presented and how these systems fit volumetrically within a building. Systems will include central equipment, air and water systems and duct design.

During the latter portion of the semester there will be a discussion on glazing, sun paths and solar control, as well as passive environmental systems such as solar heating, natural ventilation and evaporative cooling.

We will study building transportation systems (elevators, escalators, moving walkways) and their impact on a building's layout and architecture.

The semester will conclude with a lecture on building electrical systems, Information Technology (IT) systems and security systems.

| | |
|-------------|---|
| Sept 8 | Context for building systems design. A Case for Sustainability |
| Sept 15 | Drivers of Change in the built environment. Sustainability in the built environment. |
| Sept 22 | Sustainability in the built environment |
| Sept 29 | Climate and Comfort Case studies |
| October 6 | Mid-term Exam |
| October 13 | Heat Flow, Facades CaseStudie |
| October 20 | Heating and Cooling Calculation Methods |
| October 27 | Mechanical and Electrical Equipment |
| November 3 | Mechanical Systems for Small Buildings Case studies |
| November 10 | Mechanical Systems for Large Buildings Case Studies |
| November 17 | Duct Design |
| November 22 | Passive Environmental Systems Design Case Studies |
| December 1 | Building transportation systems (Horizontal and Vertical Transportation) |
| December 8 | Electrical, IT and Security Systems |
| December 15 | Final Exam |

Spring 2018

Design of passive heating and cooling systems and the impacts that these systems have on building form, façade performance, etc.

Introduction to the US Green Building Council's LEED rating system for buildings with a focus on LEED NC (new construction). Discussion on pre-requisites and credits and what is being done to meet them.

We will have discussions on the indoor environment, what causes poor indoor conditions (air quality, visual and acoustic environments) and what can be done to mitigate these undesirable effects.

There will be a presentation of lighting systems – both electric lighting and natural lighting systems. The presentation will include lighting criteria, types of light sources, analysis techniques.

There will be a series of lectures on fire and life safety systems in buildings. These will include Fire alarm and detection, smoke management, fire protection and lightning protection. We will look into alternative (renewable) energy systems such as biomass, solar and wind and how these systems are integrated into building design. For example, building integrated photovoltaics.

The semester will conclude with a discussion on plumbing systems (water, waste and vent). Concepts into sustainable waste management using greywater and blackwater systems will be presented and the use of natural systems (biofiltration) to manage stormwater will be introduced.

There will be a visit to Arup's Soundlab in New York. The Soundlab enables designers to evaluate the acoustics of spaces by actually hearing sounds inserted into a 3-D computer model of the space. Prior to the demonstration, there will be a short lecture on Architectural Acoustics.

A class project will be the design and analysis of a net-zero energy building. Students will work in small teams and will utilize all the information they have accumulated during the Fall and Spring semesters. Public domain software (HEED) will be used to analyze the energy performance of the designed building.

| | |
|-------------|--|
| January 19 | Passive cooling systems Case studies |
| January 26 | Passive heating systems Case studies |
| February 2 | LEED – Introduction, Sustainable Sites, Water Efficiency |
| February 9 | LEED – Energy and Atmosphere |
| February 23 | LEED – Materials and Indoor Environmental Quality |
| March 2 | Mid-term Exam |
| March 9 | Indoor Air Quality |
| March 23 | Arup SoundLab Visit (To be confirmed) |

| | |
|----------|--|
| March 30 | Design for Life Safety - Fire Protection Performance Based Design and Fire Engineering Case Studies |
| April 6 | Design for Life Safety - Fire Alarm Systems Smoke Control Case Studies |
| April 13 | Lighting and Daylighting Case Studies |
| April 20 | Plumbing Systems – Water, Waste and Sustainable Waste Management |
| April 27 | Renewable Energy Systems – Solar, Wind and Biomass Case Studies |
| May 4 | Final Exam and Class Project Due |

General

Lectures will be supplemented with case studies of buildings that feature the types of systems that were presented in the lecture.

All class notes and homework assignments will be posted on Cooper Moodle.

During each semester, I will be in the Design Studio to advise on the integration of building environmental and other building service systems into the studio projects.

Recommended Reading

US General Services Administration – “Sustainability Matters”
http://www.gsa.gov/graphics/pbs/Sustainability_Matters_508.pdf

US General Services Administration – “Principles of Sustainable Development”
http://www.wbdg.org/ccb/browse_doc.php?d=8157

US General Services Administration – “Real Property Sustainable Development Guide”
<http://www.gsa.gov/graphics/ogp/SustDevelGuide.pdf>

“Thermal Delight in Architecture” – Lisa Heschong, The MIT Press

B.9 Building Systems, C.3 Integrative Design

3rd Year Studio, Cooper Union, Spring 2017

Benjamin Aranda (Coordinator), Nima Javidi, Sam Anderson, Ashok Raiji, Sheng Shi



Las Vegas Museum of Contemporary Art

The subject of this studio is the design of a new contemporary art museum for the city of Las Vegas. Surprisingly, Las Vegas, the epitomization of urban spectacle and entertainment, does not have a dedicated contemporary arts museum. This is now changing as arts organizations and the city are in dialogue for a new plot in downtown Las Vegas slated for the development of a museum called Symphony Space (pink above). While the proximity to the old downtown makes the site historically charged, it is the location alongside Las Vegas Boulevard that give the site its enhanced urban value, continuing a linear sequence of connected walkable spaces from The Strip and through historic Downtown. To inspire this site's future as a museum, students will research the evolving state of contemporary art while using the desert ecology itself as inspiration.



Surrounding Las Vegas is a swatch of desert that epitomizes the American west in its natural splendor, settlement history and technological promise. Within this swatch national monuments like the Grand Canyon, infrastructural feats like the Hoover Dam, utopian experiments like the Biosphere and Arcosanti, new forms of power generation like solar arrays and wind farms, and commercialized development like The Vegas Strip all highlight the persistent hold the desert has on American ingenuity and the architectural imagination. The dry air, clear skies, and geological formations taking place over thousands of years inform

and inspire the way humans inhabit it. From ancient cliff dwellings to utopian structures, from movie sets to casinos, architectural experiment within the desert comes in many forms and varying degrees of permanence. In some cases, these experiments have proven to fail like gold rush ghost towns and late twentieth century utopian experiments. In other cases the natural conditions have created military and infrastructure projects of epic proportions. The students will be asked to take it all in, the cultural and geological shifts of this area in all their wonder, and to focus intensely on the specificities of this climate and the way they produce an architecture that is responsive and ecological. The cloudless skies have made the aviation, technology, and alternative energy industries a permanent fixture around Las Vegas. The Hoover Dam and massive solar arrays stand as engineering triumphs drawing energy from the desert. In this inspirational context students will grapple with how the desert can be captured as not only a site for new architecture, but as a process that defines it.

METHODOLOGY

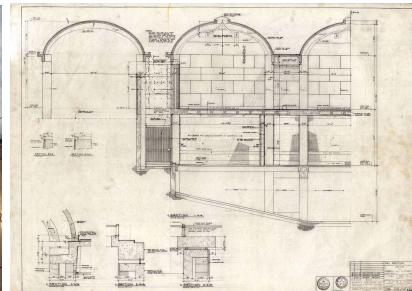
The studio is divided into 3 parts in order to develop the Museum program into a fully resolute architectural proposal:

- 1A Museum Definition**
- 1B Lighting Prototype**
- 2 Museum Sketch**
- 3 Building Development**

Each part is composed of assignments and desk crits that lead to pin-ups. Emphasis is placed on developing the student's voice and position leading towards the production of deliverables. There is a dynamic between Desk Crits presentations and Pin-Ups that asks the student to learn new tools through critical thinking and concept development. The Spring semester of Design III demands a rigorous and conceptual exploration of building concepts - Structure, Program, Lighting and Environment- into a single designed organization. Each student will work individually and be held responsible for resolving all of the factors that condition architectural design. At the students disposal is a team of instructors that together offer a depth of expertise and experience. Failure to successfully resolve these issues will be grounds for not passing the studio. Each exercise will be graded and count toward the final semester grade

PART 1: PARALLEL PROCESS, MUSEUM DEFINITION VS LIGHTING PROTOTYPE

The first part of the studio involves what we call a *Parallel Process* as students will juggle two types of experimentation simultaneously. The first type is programmatic research into the typology of the Museum in the 21st century. The second type is physical research into a Lighting Prototype, an instance of how to control light into a single space. At the heart of this parallel process is a disengagement with any a-priori notions about what the building should be, but instead the adoption of an open-ended experimental process of sketching using isolated generative models, both computational and physical, that will buttress the critical programmatic thinking. The physical design of light in contrast to the larger arguments of program will later converge with a building sketch on the site.



1A Prototype Module: The Lightscoop

The Lightscoop assignment will be a focused design exercise on form, enclosure and patterns of distribution of light (natural and artificial) within a single space. The spatial unit will be investigated as a *module* with the capacity for repetition and/or extrusion and students will be asked to critically evaluate the role of modularity in architecture. Modularity has long been an animating impulse for architecture, but here it is offered with a twist: the possibility of having the efficiency of modularity without the stagnation of information that conventional repetition entails. Within this module students will immediately interrogate structure, enclosure and transparency as physical characteristics that define its performance. More specifically students will design and analyze two paradigms of light: natural light for a painting gallery (which require diffused, north light) and for sculpture gallery (where direct light is a virtue). Light will be treated as an instance of a larger modulation and investigate a range of themes; from penetration and distribution of light (natural and artificial) within a single space, to glazing and enclosure at the moment of fissure in the geometry, all the way to issues around structure, slopes and drainage. In the next round students will investigate the spatial potential arising from aggregating the module and creating the genealogy of their museum's exhibition space.

Assignments: Lightscoop Design, Module Analysis, Two 1/2" scale models



1B Museum Definition

The 21st century museum is defined by two opposing and unstable forces that seek to undermine its fixed and solid edifice. On the one hand, the nature of art is changing such that notions of scale, media, and duration continually challenge a building's ability to literally contain and view what have become either impossibly large, ephemeral, or virtual experiences. Land Art, for instance, has exorcised itself from the museum walls completely and it is this part of the world, home to Michael Heizer's City and James Turrell's Roden Crater, that can uniquely lay claim to its authorship. There's something about the desert that dares adventure to the limit. On the other hand, cities are demanding their museums to deliver a 360 degree cultural experience. It's not just about the display of art but rather an absorption of all manner of cultural enterprises from shopping, eating and entertainment to education and working. As the museum evolves it is less clear what it is exactly supposed to do. Students will be asked to consider this indeterminate nature of the museum program in Las Vegas, America's 24-hour city. All that said, students will have to deliver a programmatic offering that includes Program will have three primary constituents:

1. **Galleries and other public spaces**
Spaces such as galleries for different media (new media, paintings, sculpture, works on paper)
2. **Back of house for art**
Art loading dock, art storage, art shipping and handling, exhibition set up, conservation, photography
3. **Back of house for non-art**
Curatorial offices, administrative offices, offices for the departments, mechanical rooms, non-art dock

While the two sets of spaces that include art would need strictly controlled temperature and relative humidity, the office functions should take greater advantage of temperate months for passive cooling. Students will be asked to create a graphic matrix of program area distribution to analyze the various dependencies and nested relationships that are not yet spatial but do consider layout and circulation.

Assignments: Slide Show, Program Analysis

PART 2: MUSEUM SKETCH



In order to produce an informed *museum sketch*, students will consider the Light and program research in the desert city of Las Vegas. In this part of the semester, students sketch their museum on site, positioning their Lighting Prototype logic within the varied conditions of the site. If the prototype is a spatial instrument then the sketch is a release of that instrument on its territory. Influenced by its own internal modulation and repetition across the site as well as external issues such as orientation, weather and urban contexts, the sketch demonstrates not so much a building as a prototype-in-performance. Students will be introduced to advanced modeling techniques to modulate variation and build physical models all the while accessing context-driven information such as weather and geography.

Assignments: Site Analysis, Site Model, Massing Model

3. MUSEUM DEVELOPMENT



The Spring semester of Design III demands a rigorous and conceptual exploration of building integration - Structure, Program, Lighting and Environment- into a single designed organization. The idea that such an integration is a linear process that proceeds from sketch to detail is a fallacy. Instead, design is a highly volatile process that adjusts and is sometimes overwhelmed by new information entering the fold. For this reason, students will be challenged to clearly articulate their architectural concept through its various manifestations because despite all the weight of a building's responsibilities, the strength of an architectural concept is not how immutable it remains to the forces of reality but rather how it accepts them and in doing so reflects a deeper truth. As such it is never too early to consider all the ramifications of all building systems. The studio will find that conceptual depth resides in the constituent parts of building. In particular, this latter half of the semester will provide structural, environmental, and lighting ideas integrated into your buildings. The extended faculty of your Building Tech, Structures, and EVT courses are an integral part of this design studio.

SCHEDULE

Sam Anderson (SA), Benjamin Aranda (BA), Nima Javidi (NJ)

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|-----------------|---|------------|
| Week 1 | INTRODUCTION | |
| January 18 Wed | PRESENTATION: Studio Presentation | BA, NJ, SA |
| January 19 Thur | PRESENTATION: Assignment 1, Light Scoop | BA, NJ |
| Week 2 | PART 1: PARALLEL PROCESS | |
| January 24 Tue | Desk Crit: Lightscoop | BA, NJ |
| January 25 Wed | PIN-UP 1: Light Scoop PRESENTATION: Assignment 2 Museum Definition | BA, NJ, SA |
| January 26 Thu | Desk Crit: Museum Definition | BA, NJ |
| Week 3 | | |
| Jan 31 Tue | Desk Crit: Parallel Process | BA, NJ |
| Feb 1 Wed | Desk Crit: Parallel Process | BA, NJ, SA |
| February 2 Thu | Desk Crit: Parallel Process | BA, NJ |
| Week 4 | | |
| February 7 Tue | Desk Crit: Parallel Process | BA, NJ |
| February 8 Wed | PIN-UP 2: Museum Definition + Lightscoop PRESENTATION: Assignment 3, Museum Sketch | BA, NJ, SA |
| February 9 Thu | Desk Crit: Museum Sketch | BA, NJ |
| Week 5 | PART 2: MUSEUM SKETCH | |
| February 14 Tue | Desk Crit: Museum Sketch | BA, NJ |
| February 15 Wed | Desk Crit: Museum Sketch | BA, NJ, SA |
| February 16 Thu | HOLIDAY | BA, NJ |
| Week 6 | | |
| February 21 Tue | HOLIDAY | BA, NJ |
| February 22 Wed | PIN-UP 3: Program Research, Lighting Prototype, Physical Site Model, Museum Sketch | BA, NJ, SA |
| February 23 Thu | Desk Crit: Museum Sketch | BA, NJ |
| Week 7 | | |

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|-----------------|--|---------------------------|
| February 28 Tue | Desk Crit: Museum Sketch | BA, NJ |
| March 1 Wed | Desk Crit: Museum Sketch | BA, NJ, SA |
| March 2 Thur | Desk Crit: Museum Sketch | BA, NJ |
| Week 8 | | |
| March 6 Mon | Desk Crit: Museum Sketch | BA, NJ |
| March 8 Wed | MID-REVIEW: Program Research, Prototype, Physical Model of Museum Sketch | BA, NJ, SA, AR, SS+guests |
| March 10 Fri | Desk Crit, post review | BA, NJ |
| Week 9 | | |
| March 11 - 19 | SPRING BREAK | |
| Week 10 | PART 4: MUSEUM DEVELOPMENT | |
| March 20 Mon | Desk Crit: | BA, NJ |
| March 22 Wed | Desk Crit: | BA, NJ, SA |
| March 24 Fri | Desk Crit: | BA, NJ |
| Week 11 | | |
| March 27 Mon | Desk Crit: | BA, NJ |
| March 29 Wed | Desk Crit: | BA, NJ, SA |
| March 31 Fri | Desk Crit: | BA, NJ |
| Week 12 | | |
| April 3 Mon | Desk Crit: | BA, NJ |
| April 5 Wed | PIN-UP | BA, NJ, SA |
| April 7 Fri | Desk Crit: | BA, NJ |
| Week 13 | | |
| April 10 Mon | Desk Crit: | BA, NJ |
| April 12 Wed | Desk Crit: | BA, NJ, SA |
| April 14 Fri | Desk Crit: | BA, NJ |
| Week 14 | | |
| April 17 Mon | FULL BUILDING REVIEW | BA, NJ |

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| April 19 Wed | FULL BUILDING REVIEW | BA, NJ, SA |
| April 21 Fri | Desk Crit: Production Oriented | BA, NJ |
| Week 15 | | |
| April 24 Mon | Desk Crit: Production Oriented | BA, NJ |
| April 26 Wed | Desk Crit: Production Oriented | BA, NJ |
| April 28 Fri | Desk Crit: Production Oriented | BA, NJ |
| Week 16 | | |
| May 1 Mon FINAL DATE TBD | Final Review | BA, NJ, SA, AR, SS+guests |