Northeastern University
School of Architecture

Interim Progress Report for Year Five

November 30, 2023

Contents

1. INSTRUCTIONS AND TEMPLATE GUIDELINES

Purpose
Continuing accreditation is subject to the submission of interim progress reports at defined intervals after an eight-year or four-year term of continuing accreditation is approved.
This narrative report, supported by documentation, covers three areas:

1. The program's correction of not-met Conditions or Student Performance Criteria from the previous Interim Progress Report.
2. Significant changes to the program or the institution since the last visit.
3. Summary of preparations for adapting to 2020 NAAB Conditions.

Supporting Documentation

1. Evidence must be provided for each Condition and SPC "not met," including detailed descriptions of changes to the curriculum that have been made in response to not-met SPC that were identified in the review of the previous Interim Progress Report. Identify any specific outcomes expected to student performance. Attach new or revised annotated syllabi identifying changes for required courses that address unmet SPC.
2. Provide information regarding changes in leadership or faculty membership. Identify the anticipated contribution to the program for new hires and include either a narrative biography or one-page CV.
3. **Evidence of student work is required for SPCs 'not met' in the most recent VTR.**
    - **Provide three examples of minimum-pass work for each deficiency** and submit student work evidence to NAAB in electronic format. (Refer to the "Requirements for the Use of Digital Content in Interim Progress Reports" for the required format and file organization.)
    - All student work evidence must be labeled and clearly annotated so that each example cross-references the specific SPC being evaluated and shows compliance with that SPC.
4. Provide additional information that may be of interest to the NAAB team at the next accreditation visit.

Outcomes
IPRs are reviewed by a panel of three: one current NAAB director, one former NAAB director, and one experienced team chair.[1] The panel may make one of three recommendations to the Board regarding the interim report:

1. Accept the interim fifth-year report as having demonstrated satisfactory progress toward addressing deficiencies identified in the most recent VTR;
2. Reject the fifth-year interim report as having not demonstrated sufficient progress toward addressing deficiencies and advance the next accreditation sequence by at least one but not more than three calendar years. In such cases, the chief academic officer of the institution will be notified with copies to the program administrator and a schedule will be determined so that the program has at least six months to prepare an APR.
3. The annual statistical report (See Section 9 of the 2015 Procedures)) is still required in either case.

Deadline and Contacts
IPRs are due on November 30. They shall be submitted as bookmarked PDFs sent to accreditation@naab.org. As described in Section 10 of the 2015 NAAB Procedures for Accreditation "…the program will be assessed a fine of $100.00 per calendar day until the IPR is submitted." If the IPR is not received by January 15, the program will automatically receive Outcome 3 described above. Email questions to accreditation@naab.org.

Instructions

1. **Reports shall be succinct and are limited to 40 pages/20 MBs, including supporting documentation.**
2. Type all responses in the designated text areas.
3. Reports must be submitted as a single PDF following the template format. Pages should be numbered.
4. Supporting documentation should be included in the body of the report.
5. Remove the #4 "Requirements for the Use of Digital Content in Interim Progress Reports" pages before submitting the interim progress report.

2. EXECUTIVE SUMMARY OF 2018 NAAB VISIT

CONDITIONS NOT MET

2018 VTR	Requires Update on Progress in 5-Yr. IPR
I.1.5 Long-Range Planning	☐

STUDENT PERFORMANCE CRITERIA NOT MET

2018 VTR	Requires Update on Progress in 5-Yr. IPR
B.4 Technical Documentation	☒
D.5 Professional Ethics	☒

3. TEMPLATE

Interim Progress Report
Northeastern University
School of Architecture
Master of Architecture I
(Northeastern University B.S. Arch. or accredited B. Arch. + 32 credits)
Master of Architecture II (Pre-Professional Degree + 60 credits)
Master of Architecture III (Non Pre-Professional Degree + 96 credits)
Year of the previous visit: 2018

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

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

Name: Amanda Lawrence
Title: Interim Director, School of Architecture
Email Address: am.lawrence@northeastern.edu
Physical Address: 151 Ryder Hall
360 Huntington Avenue
Boston, Massachusetts, 02115

Any questions pertaining to this submission will be directed to the chief administrator for the academic unit in which the program is located.

Chief academic officer for the Institution:

Name: David Madigan
Title: Provost
Email Address: d.madigan@northeastern.edu
Physical Address: 360 Huntington Avenue, Boston, Massachusetts, 02115

Text from the VTR and IPR Year 3 review is in the gray text boxes. Type your response in the designated text boxes.

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

a. Progress in Addressing Not-Met Conditions

N/A

b. Progress in Addressing Not-Met Student Performance Criteria

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

2018 Visiting Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 5120 Comprehensive Design Studio (technical drawings and models); a lecture for ARCH 2240 showed evidence of CSI discussion and an example of a specification section, which is only offered in the M. Arch. I track. No evidence was found for preparation of outline specifications in the M. Arch. II and M. Arch. III tracks and very limited evidence in the M. Arch. I track**.**

Northeastern University, 2021 Response: Advancement of Specifications in Curriculum: Following the 2018 NAAB visit, specifications were added as a topic of study to ARCH6430 'Case Studies in Professional Practice I'. (Please see Syllabus for ARCH6430 in appendix). Specifications are specifically reviewed in Class 21 and also discussed earlier in Class 18 as part of navigating ethics and contracts of the Citicorp structural case study. All students in the NAAB accredited degree programs (MArch 1, 2 and 3) are required to take ARCH 6430. Additionally, all students in the MArch 1 and 3 degree tracks are required to take ARCH 2240 (Please see Syllabus and assignment for ARCH2240 in Appendix) which teaches about specifications through both lectures and assignments. Specifically, the assignment requires students to link products used on a masonry cavity wall section to Master Spec documents provided by the professors.

Northeastern University, 2023 Response: As part of the M.Arch. 1-year and 3-year, ARCH 2240 is a required course. One of the assignments (consistent semester to semester) is to document a brick cavity wall, including detailed construction drawings and outline specifications. See Project 2 Cavity Wall Section attached in the Appendix (p. 10) and 3 low-pass examples of Student work for B.4 Technical Documentation. M.Arch. 2-year degree candidates must submit material to be exempted from ARCH 2240, per the form attached in the Appendix (p. 13), or they are required to take the course. (This demonstrates that the M.Arch. 2-year students have covered the learning outcomes associated with that course during their prior education.)

D5 Professional Ethics: Understanding of the ethical issues involved in the exercise of professional judgment in architectural design and practice, and understanding the role of the AIA Code of Ethics in defining professional conduct.

2018 Visiting Team Assessment: Evidence of student achievement at the prescribed level was not found in student work. The only example of this SPC was a copy of the AIA Code of Ethics included with a course schedule for ARCH 6440 stating that it was required reading; however, there was no evidence that the understanding of the NCARB "Rules of Conduct" was referenced, which is also required.

Northeastern University, 2021 Response: Advancement of Specifications in Curriculum: Following the 2018 NAAB visit, the NCARB Rules of Conduct were added as required reading and topic of discussion to ARCH6430 'Case Studies in Professional Practice I'. (Please see Appendix for ARCH6430 Syllabus and Schedule). The NCARB Rules of Conduct (along with AIA Code of Ethics) are now introduced as required reading in Class 17, and reviewed in class discussions in Class 18 as part of an Ethics Reading Review Exercise. Currently, the SoA is working to add greater focus on community engagement and participatory practice to ARCH 6430. These topics were highlighted by students in the 2020 social and racial justice focus groups as areas of particular interest. All students in the NAAB accredited degree programs (MArch 1, 2, and 3) are required to take ARCH 6430. Additionally, since 2018, the SoA has implemented a recurring lecture series on Spatial Inclusivity in Fall semesters. This series invites guest speakers who have focused extensively on questions of ethics, community engagement and inclusivity in the design of the built environment.

Northeastern University, 2023 Response: ARCH 6430 (Case Studies I, required of M.Arch. students in all programs) currently includes the AIA Code of Ethics and the NCARB Rules of Conduct as required reading. The Citicorp Tower Reading Response assignment is included in the Appendix (p.14). Attached in the student work folder are three low-pass examples of written responses for this assignment from Fall 2023. This assignment asks students to think critically about the failures of design in the Citicorp Tower and Millenium Tower projects, particularly through the lens of Professional Ethics.

II. Changes or Planned Changes in the Program

Northeastern University, 2023 Response:

Faculty retirement/succession planning:
Director Dan Adams, who was also Director of the School of Architecture (SoA) for the 2018 accreditation visit, was reappointed for a new 5-year term as Director in 2023. Founder of the School of Architecture and longtime Director George Thrush retired in 2019. Similarly, longtime graduate programs manager Mary Hughes retired in 2021, and in 2022 Jessica Marder was hired as the permanent Graduate Program Manager and second Administrative Officer for the School.

Administration changes (dean, department chair, provost);
Northeastern University, and by extension, the College of Arts, Media, and Design (CAMD) has grown significantly since 2018. Administratively, the growth in enrollment and programs in the School of Architecture necessitated a new Associate Director position to be held by a full-time faculty member, which was approved at the end of the 2022-23 academic year. In the CAMD, several new Associate Dean positions have been created including oversight of Research, Faculty, Network Programs, and Student Experience which help support our faculty. Additionally, the College's research support office has grown significantly with a dedicated specialist for budget management and two positions for proposal development, one for government programs and the other for private foundations. At the university level, the first Chancellor position was created and filled in 2019. Notably, School of Architecture Professor Jane Amidon, who was in the CAMD Dean's Office at the time of the 2018 visit, has now been promoted to Vice Provost of Network Academic Programs at Northeastern.

Changes in enrollment (increases, decreases, new external pressures)
Total enrollment in our three accredited graduate programs decreased following the 2018 NAAB visit—2018/19 (49), 2019/20 (42)—before reventually coming back to 2018 levels 2020/21(59), 2021/22 (60) and 2022/23 (79), 2023/24 (81). While the number of students in the 1-year degree decreased, with the exception of AY 2020-21, we have yielded the same percentage of students graduating from our BS Architecture program. We have also created new entry pathways to the 2-year M.Arch. degree for Northeastern students coming from combined majors (such as Civil Engineering and Architectural Studies) and the BS Architectural Studies program. The stability of the M.Arch. program along with overall university growth has allowed us to offer more electives, specializations, and dedicated studios for each cohort. The number of students accepted into our 2-year M.Arch. from other schools has decreased as we have introduced a more rigorous review of building technology courses (see ARCH 2240 Waiver form in Appendix, p. 13), with many of them determined to be better placed in the 3-year M.Arch.

New Opportunities for Collaboration
The majority of our new hires since 2018 have interdisciplinary appointments, following a university-wide strategy to encourage collaboration among colleges and paralleling the growth of combined majors at the undergraduate level. Almost 25% of our faculty hold joint or affiliate appointments in different departments and colleges, including Art and Design, History, Engineering, Public Policy and Urban Affairs, and Computer Science. The School of Architecture also co-administers the Master's in Urban Planning and Policy degree in collaboration with the School of Public Policy and Urban Affairs, led by Professor Gavin Shatkin. Associate Professor Sara Carr is a lead member alongside other faculty in the College of Social Science and Humanities, Bouve College of Health Sciences, and Khoury College of Computer Sciences on the creation and administration of a new Health, Humanities, and Society initiative and also a member of the Critical Health Humanities group at the Mahindra Center for Humanities at Harvard University. Since 2016, Northeastern has also offered faculty an opportunity to apply for Interdisciplinary Research Sabbaticals to be in residence at another Northeastern college during their normal sabbatical year. Since then, our faculty have had residences in numerous other colleges including at the School of Law and College of Engineering. Our faculty have also increasingly been engaged with interdisciplinary research as evidenced through our growth in research grants (see below). Since 2018, seven winning Tier 1 proposals, an internal Northeastern University interdisciplinary seed grant program aimed at encouraging such

partnerships, (totaling $348,903) have had School of Architecture faculty members as part of the teams. Associate Professor Michelle Laboy is the only person to have twice won the AIA College of Fellows Latrobe Prize, which rewards faculty teams engaged in interdisciplinary research that advances the architecture profession. Similarly, faculty are also engaged in architectural and urban research funded by the Department of Homeland Security, National Science Foundation, US Army, as well as collaborating with researchers at numerous national and international universities including Massachusetts Institute of Technology, Harvard University, ETH Zurich and Roxbury Community College.

Changes in financial resources (increases, decreases, external pressures)
While increases to our yearly operating budget have remained more or less commensurate with inflation, our research grants won by faculty as well as College-level support for graduate student scholarships and assistantships have largely increased. Since 2018, our faculty have garnered over $4 million in research grants as sole investigators or part of other teams. We have also received over $130,000 in gifts, which we have put towards enhancing the student experience, including buying supplies for every first-year student, as well as materials for other courses and supporting studio field trips. In AY 2022-23 we were able to offer $804,764 in merit-based graduate student scholarships, and 35 teaching or research assistantships for our graduate students (an increase of 84% from positions offered in AY2021-2022) and is projected to grow more as our enrollment increases and CAMD's graduate programs budget grows in the coming years. In AY2022-23 we also received $250,000 from CAMD for improvements to the Ruggles Studio (see below for more detail). We have also recently been putting more resources towards supporting travel for our Comprehensive and Master's Research Studios and are requesting more college-level support towards this initiative to expand this aspect of experiential education.

Significant changes in educational approach or philosophy
In the past few years, we have been under increasing pressure from the university to propose a four-year plan of study for our pre-professional BS Architecture degree, which is the entry pathway for our 1-year M.Arch. degree program. This also follows national discussions by NAAB, NCARB, and ACSA on how to shorten time to the professional degree and licensure for equity reasons. We responded by proposing both a 4-year and revised 5-year plan of study (Appendix p. 15) which received final approval in AY2022-23 to be officially rolled out in AY2023-24. Both plans of study require the same courses and credit hours, the primary difference between the two in that the 4-year plan requires coursework taken in the summer and one co-op instead of two. As a result of these new plans of study, we have moved the Integration (formerly Comprehensive) Studio and Integrated Building Systems course into the graduate curriculum where it was previously taken by both graduating BS Architecture students and graduate students. We have also redesigned studio curriculum at the graduate level to better serve incoming 2- and 3-year M.Arch. students, with more concentration on reinforcing base technological and representational skills. (See new M.Arch plans of study in Appendix, p. 16.)

Currently all graduating M.Arch. students take a two-semester Master's Research Studio. We are currently submitting a proposal to turn the first semester of that sequence into a 4-credit Research Methods Seminar instead that will ensure consistency and more rigor into the final Research Studio projects (Appendix, p. 17-19). This will also allow graduate students to take an extra Options studio to explore interests and reinforce design skills. As of 2021-22, we have also started a Design Fellows program in the School of Architecture, which invites applicants to spend a year on the faculty, lead one of the Research Studios, and develop a public exhibition or presentation on their work at the end of the year. This program keeps our studio options on the forefront of practice and built environment research and provides a mentorship path for potential faculty and/or practitioners.

Maintaining rigor in our graduate curriculum and balancing interdisciplinarity alongside enforcing core skills and learning outcomes is our primary goal in staying current with the demands of the profession. Since 2018, we have had two high-profile Distinguished Professors of Practice, Kiel Moe and Alex Krieger, whose respective expertise in climate resilience and urban development

have reinforced our core instruction. We have also further engaged Northeastern's research staff in our curriculum. Architecture librarian Regina Pagani hosts regular research "pop-ups" in the studio introducing students to books on specific topics, new resources, and other library updates; additionally, she has led modules on research methods, source evaluation, citation software, and archival access. GIS Specialist Bahare Sanaie-Movahed has similarly led modules on spatial analysis, story map creation, and social and environmental data exploration.

Our goal as the graduate programs grow and these changes are instituted is to further decouple graduate courses from undergraduate cohorts. We will also soon be offering M.Arch. concentrations, which will guide students to use elective slots to specialize in a topic of their choosing, especially outside of the School of Architecture. Concentration offerings will be in Sustainable Urban Environments, Data Visualization, Experience Design, Extended Reality (I.e. Virtual Reality), Sustainable Building Systems, Urban Analytics, and Urban Studies and are in final approval stages at the College and University levels. These also reflect the expertise provided by the increase in our interdisciplinary faculty as noted above. CAMD has also started a PhD in Interdisciplinary Design and Media, which we are working with to identify courses in our graduate curriculum to support and candidates that have architecture-relevant research.

As noted above, our 2020 conversations on race and social justice in the curriculum have led us to examine and now start to institute how those topics are integrated holistically into our approach. In 2021, we hired two tenure-track Assistant Professors in Race and Social Justice in the Built Environment, Lily Song and Cara Michell, who lead seminars and studios on participatory mapping and stakeholder analysis, community engagement, and anti-displacement strategies. We are also engaged in efforts to ensure equity at all levels of education, extending to a revised studio culture policy we are working on with our student advisory group that ensures we maintain a culture of inclusivity and is supportive of student health.

Changes in physical resources (e.g., deferred maintenance, new building planned, cancellation of plans for new building)
As our enrollment has grown at both undergraduate and graduate levels, our studio space has become more constrained and our location in central Boston does not allow for immediate expansion. As noted above, we received a $250,000 grant to re-think the physical capacity and operations of the Ruggles Studio, part of which we applied towards new tabletops for desks and creating more flexible and collaborative spaces in response to more digital work. We have addressed the space issue by desk sharing on alternate days and providing hoteling desks, primarily at the undergraduate level. At this time, Master's Research Studios and Comprehensive Studio have individual desks that are not shared.

Northeastern has spent significant resources on a new building, EXP, that offers 15,000 square feet of fully staffed makerspaces available to all students with facilities such as large-scale 3D printing, wood and metal shops, sewing machines, and electronics. Within CAMD, we have a newly established Media Studios Organization (MSO) which has sensors, cameras, and other equipment for loan, production studios for podcasts or other media, a computer lab, an immersive media lab where students can import their work into virtual reality environments, and physical fabrication spaces. The expansion of services in EXP and MSO has allowed us to move some equipment out of Ruggles Studio and purchase new or additional resources Architecture students use most, namely 3D printers and CNC and laser cutting equipment, which are available to our students only.

Northeastern's Snell Library has also acquired two significant archives we have integrated extensively into instruction and research, namely the Boston Globe Photo Archive and Stull and Lee Collection, the records of one of Boston's first African-American owned architectural firms who had a significant impact on the city's urban landscape.

III. Summary of Preparations for Adapting to 2020 NAAB Conditions

Please provide a brief description of actions taken or plans for adapting your curriculum/ classes to engage the 2020 Conditions.

Northeastern University, 2023 Response: The School of Architecture Executive Committee, in consultation with the faculty, has used NAAB shared values to define eight Program Learning Outcomes. We are in the process of automating the system of self-assessment using tools implemented by Northeastern University. Northeastern University has implemented the HelioCampus system, which is integrated into CANVAS, to support continuous review and improvement of learning outcomes throughout the university. Overall program learning outcomes are assigned to each course either directly or through linked course learning outcomes to track student accomplishment and evidence of same in compliance with the NAAB 2020 Conditions. This is the first year that we will be collecting data from the full academic year. We will be working with the curriculum and executive committees to refine the self-assessment process.

IV. 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. Provide three examples of minimum-pass student work for each SPC 'not met' in the most recent VTR.)

Northeastern University, 2023 Response: Click here to enter text.

Northeastern University
School of Architecture
ARCH 2240 Structures 2: Architectonic Systems

Spring 2023 – Project 2: Cavity Wall Section
Assigned: Thursday, March 16th
Interim Submission, Monday, March 27th
Due: Thursday, April 13th

PROJECT
Project 2 will investigate and document masonry cavity wall construction in a 3/4" = 1'-0" scale wall section.

"Working Drawings" or "Construction Documents" are the instrument architects use to precisely describe their constructional intentions to the contractor. Clarity, legibility, and ease of locating information are critical characteristics of any architect's technical drawing. Ultimately, "Construction Documents" constitute legal documents.

This wall section will be of a two-story brick-veneer with a CMU back-up cavity wall located in the northeast of the USA. It will have a full basement and a "flat roof" with a "green roof" system. The first floor and second floor will have different floor structures and different finished surfaces. Your section shall cut through a window at each level. Each window will employ a "light shelf" detail that is structured from the wall.

Your wall section shall be continuous from foundation footing to the parapet. The exterior shall be to the left, and the interior to the right of your drawing. It will show a lateral depth of 6' from the exterior face of the wall. All elements shall be clearly and logically labeled: the organization and logic of the labeling must be designed to communicate most clearly your constructional intentions to the contractor. Align and left or right justify your labels.

Similarly, dimension strings must also be designed to communicate most clearly your dimensional intentions to the contractor. You must draw two critical continuous dimension strings that dimension the following: 1. the floor construction thicknesses to the rough framing such as slab, subfloor, joists and beams (not to finished surfaces like face of drywall), 2. The critical details of the CMU wall (top of bond beams, rough openings for windows). Both dimension strings will be continuous from bottom to top of drawing.

Line weight is particularly important for legibility of such a complex drawing. Develop a system for dark lines for section cuts, medium lines for internal wall information, and light lines for objects beyond in elevation, dimension lines, and leader lines for notes. Any hatching of materials must be done with discretion and lightness so it does not dominate the drawing. Many important components of masonry cavity wall construction are too thin to represent to scale: often you must exaggerate a material thickness to be able to read it clearly (e.g., for flashing or membranes.)

When you are producing your drawings on the computer, you must realize how lines will print so they don't bleed together: practice PDF prints will be necessary to evaluate lineweights and hatches. Not all required construction elements are listed below; however, you will still be responsible for them in your drawing. Do not add borders to your drawings, and use a neutral typeface (Arial or Helvetica).

REQUIREMENTS FOR FINAL PROJECT

Final CAD drawing printed as a PDF on 24" x 36" vertical format with name, professor's name, date, course name and number, scale of drawing (3/4" = 1'-0" scale), and drawing title (Masonry Cavity Wall Section) in the lower right hand corner.

In addition to the drawing, you are also to prepare outline specifications for the footings, foundation walls, CMU and brick cladding and interior finishes. This will be submitted as a PDF only as 8 ½" x 11" document on the provided class template.

Projects are due at the beginning of class on the due date. Late projects will be reduced one full letter grade each day it is late. Projects will be evaluated on their completeness and accuracy of detail [90%], quality of craftsmanship and quality of page composition (10%).

Please note that digital files are easily shared. You are welcome and encouraged to consult with your classmates, but sharing digital drawing files, even the smallest copying and pasting of lines, is plagiarism.

ELEMENTS

1. Foundation/basement [unfinished] minimum 8'-0" floor to ceiling:
    a. Represent a 1' deep x 2' wide continuous poured-in-place concrete footing
    b. Represent a poured-in-place concrete foundation wall
    c. Represent a 6" basement floor slab with wire mesh, on top of 4" compacted gravel and a vapor barrier
    d. Represent proper waterproofing, footing drain, and requisite drainage system on the foundation wall
    e. Represent proper insulation for the basement

2. First floor structure:
    a. Represent 2x10 floor joists with metal tie straps bearing on the wall that is cut in section
    b. Represent 3/4" subfloor and 3/4" finished floor

3. First floor walls and ceiling, minimum 8'-0" finished floor to finished ceiling:
    a. Represent modular brick veneer, 1" air-space cavity, 2" rigid insulation, and standard CMU back-up wall
    b. Represent all required flashing and weep holes
    c. Represent masonry ties every third CMU course
    d. Represent necessary waterproofing
    e. Represent exposed CMU walls in the interior
    f. Represent exposed floor structure above at ceiling

4. Second floor structure:
    a. Represent 14" deep heavy timber beams bearing on the wall that is cut in section
    b. Represent 3" solid wood decking

5. Second floor walls and ceiling, minimum 8'-0" finished floor to finished ceiling:
    a. Represent modular brick veneer, 1" air-space cavity, 2" rigid insulation, and standard CMU back-up
    b. Represent all required flashing and weep holes
    c. Represent masonry ties every third CMU course
    d. Represent necessary waterproofing
    e. Represent 5/8" gypsum wall board with proper furring on wall surfaces and strapping for the ceiling which is to also be gypsum wall board.

6. Windows minimum 3'-4" tall at each floor (rough openings should be of a dimension relating to CMU construction):
    a. Represent proper lintels over your window openings
    b. Represent proper flashing and weep holes at your window openings
    c. Represent windows as prefabricated windows: minimal detail required
    d. Add a light shelf detail to each window: this must bypass the brick veneer and attach to the CMU block back up (this may require a separate detail to be made integral to your page composition)

7. Roof structure: READ chapter 16 on roofing
    a. Represent 2x10 roof rafters with metal tie straps bearing on the wall that is cut in section
    b. Represent 3/4" sheathing
    c. Represent a minimum 4" rigid insulation on decking with a 1/4" per 1'-0" slope toward the roof drain
    d. Represent a minimum 2'-0" tall parapet wall measured from the top of your roof membrane
    e. Represent a single-ply roof membrane and its necessary connection to the parapet wall
    f. Represent a shallow "extensive" sedum green roof system
    g. Represent a roof drain in section (drain pipe is dotted in beyond 3'-0" o.c. from outer face of wall, drain tube goes away from exterior wall)
    h. Represent proper flashing at all critical points at roof and parapet

school of Architecture

School of Architecture
151 Ryder Hall
Boston, MA 02115

GRADUATE WAIVER FORM – ARCH 2240

Use the digital PDF or PRINT CLEARLY to ensure your writing is legible.
You must provide ALL required supporting documents before a final decision is made on your petition.

Name: _____ _____
First or Given Name | Last or Family Name

Anticipated semester of entry: _____

Address: _____
Street Addres (include apartment # if appropriate)

_____ _____ _____ _____
City | State (or Province) | Postal Code | Country

Communications: _____ _____
Email | Phone

Criteria	Topic	Course Number	Course Name	Grade Received	Syllabus in .zip file
Fundamental knowledge and principles including:	***Building physics and structural reasoning: resisting dead and live loads***				
	Resisting gravitational loads				
	Resisting lateral wind and seismic loads				
	Geotechnical considerations				
Ability to design constructional systems as general framing and in construction detail:	***Foundation Construction: shallow and deep foundation types, excavation types, shoring types, water management***				
	Wood Construction: wood properties, heavy timber, mass timber and engineered lumber, wood light framing				
	Masonry Construction: Stone, brick, concrete masonry unit, cavity wall construction				
	Steel Construction: steel properties, structural framing patterns, lateral bracing and structural cores, steel connections, composite steel decking, light gauge steel				
	Concrete Construction: site cast, precast, prestressing				
	Building Enclosure Construction: curtain wall types, wood light framing enclosures				
Understanding theory and cultural impact of constructional systems design:	***Embodied energy and carbon implications of construction types***				
	Cultural and labor implications of construction types				
	Building systems integration				

Continue on next page

_____ _____
Applicant Signature | Date

School of Architecture: ◯ Approved ◯ Denied ◯ More information requested
Comments or Instructions:

_____ _____ _____
Reviewer Signature | Print Name | Date

Case Response:

Please read the Citicorp case and "The Saga of San Francisco's Sinking and Tilting Millennium Tower", and craft a response to the prompt below. Think critically of the situations outlined and how the various players responded to the difficult situations.

Compare and contrast the project variables (site, owner structure, consultant structure, etc.) between the Citicorp Tower and the Millennium Tower in San Francisco. How were the failures identified in each of the projects, why is this important? Discuss the approach to correcting the issues identified in each of the two projects. What were stakeholder reactions to the problems at hand in each of the cases - what were their actions? **What are/ were the short and long term effects of the failures on the developer, owner, and architectural team in each of these cases?** Why were they approached so differently? Finally, referencing NCARB's Rules of Conduct and the AIA Code of Ethics – how might stakeholders reacted differently through these document's lenses?

[Max response 500 words]

Reading Response Grading Rubric

0 – Did Not Complete

1 – Completed but did not grasp case themes and lessons learned

2 – Completed but did not link response to overarching themes and/or crafted a unique personal response (example – Response solely summarized case content)

3 – Used key case takeaways to identify key thematic course objectives and crafted a unique personal response to the course content.

Informative PBS Documentary on the Citicorp Case can be found here:
https://www.youtube.com/watch?v=TZhgTewKhTQ [PART 1]
https://www.youtube.com/watch?v=4fUwgH0gOWo [PART 2]
https://www.youtube.com/watch?v=IBjyB8EY2m4 [PART 3]

4-Yr BS Architecture — Fall Co-op (Division A)

Catalog year 2023 — **Last Name: A-L**

Sample Four Years, 1 6-month Co-op + 1 optional 4-month co-op

Year	July-August Summer 2			September-December Fall Semester			(January-April) Spring Semester			(May-June) Summer 1		
	Course Number	Course Name	Credit Hours	Course Number	Course Name	Credit Hours	Course Number	Course Name	Credit Hours	Course Number	Course Name	Credit Hours
2023-24	1			ARCH 1120	Fundamental Architectural Design	6	ARCH 2130	Site, Space, Program	6	PHYS 1141	Physics (or Elective)	4
				ARCH 1110	Fundamental Architectural Representation	4	ARCH 23XX	Architecture History Elective 1/2	4		Elective	4
				ARCH 1310	Buildings and Cities, A Global History (+ recitation)	4	ARCH 2240	Architectonic Systems	4			
				ARCH 1000	Architecture at Northeastern	1	ENGW 1111	First Year Writing or Elective	4			
				PHYS 1141	Physics (or Elective)	4	EEAM 2000	Professional Development for Co-op	1			
					Total Hours	19		Total Hours	19		Total Hours	8
2024-25	2	Break		ARCH 2140	Urban Institutions	6	ARCH 3170	Architecture, Infrastructure, City	6		Elective	4
				ARCH 3450	Advanced Architectural Communication	4	ARCH 2340	Modern Architecture (+ recitation)	4		Elective	4
				ARCH 23XX	Architecture History Elective 2/2	4	ARCH 3210	Environmental Systems (+ recitation)	4			
				MATH 1241	Calculus (or Elective)	4		Elective	4			
					Total Hours	18		Total Hours	18		Total Hours	8
2025-26	3	Six Month Co-Op July - December						Travel Study		Choose from:	Optional 4-month Co-op Dialogue of Civilizations Electives Break	
					Total Hours	0		Total Hours	16			
2026-27	4	Choose from: Optional 4-month Co-op Dialogue of Civilizations Electives Break		ARCH 5115	Option Studio	6	ARCH 5140	Capstone Studio	6			
				ARCH 5430	Intro to Professional Practice in Architecture	4	ARCH 3370	Advanced Topics in Architectural History	4			
				ARCH 5330	Architectural and Urban Theories	4	ARCH 5310	Design Tactics	4			
				ENGW 3314	Advanced Writing in Arts, Media and Design	4	ARCH 5230	Structural Systems (+ recitation)	4			
					Total Hours	18		Total Hours	18			

BS ARCH Total Semester Hours: 142

M. Arch 1-year

	Fall Semester			Spring Semester		
2027-28	ARCH 7120	Integration Studio	6	ARCH 7140	Master's Degree Project	6
	ARCH 7220	Integrated Building Systems	4	ARCH 6340	Graduate Topics in Architecture	4
	ARCH 7430	Research Methods in Architectural Design	4	ARCH 6440	Case Studies 2	4
		Grad Elective*	4			
		Total Hours	18		Total Hours	14

M Arch 1 Total Semester Hours: 32

*1 Elective required in MArch, may be taken Fall or Spring

5-Yr BS Architecture — Fall Co-op (aka Division A)

Catalog year 2023 — **Last Name: A-L**

5-year, 2 Co-op Semester Plan Course Schedule

	September-December Fall Semester			(January-April) Spring Semester		
Ye	Course Number	Course Name	Credit Hours	Course Number	Course Name	Credit Hours
2022-23	1 ARCH 1120	Studio 1: Fundamental Architectural Design	6	ARCH 2130	Studio 2: Site, Space, Program	6
	ARCH 1110	Fundamental Architectural Representation	4	ARCH 23XX	Architecture History Elective 1/2	4
	ARCH 1310	Buildings and Cities, A Global History (+ recitation)	4	ARCH 2240	Architectonic Systems	4
	ARCH 1000	Architecture at Northeastern	1	ENGW 1111	First Year Writing or Elective	4
		Elective	4	EEAM 2000	Professional Development for Co-op	1
		Total Hours	19		Total Hours	19
2023-24	2 ARCH 2140	Studio 3: Urban Housing	6	ARCH 3170	Studio 4: Architecture, Infrastructure, City	6
	ARCH 3450	Advanced Architectural Communication	4	ARCH 2340	Modern Architecture (+ recitation)	4
	ARCH 23XX	Architecture History Elective 2/2	4	ARCH 3210	Environmental Systems (+ recitation)	4
	PHYS 1141	Physics	4		Elective	4
		Total Hours	18		Total Hours	18
2024-25	3	Six Month Co-op One July-December			Travel Study January - April January-April	16
					Total Hours	16
2025-26	4 ARCH 5330	Architectural and Urban Theories	4	ARCH 5115	Studio 6: Option Studio	6
	ARCH 5430	Intro to Professional Practice in Architecture	4	ARCH 5310	Design Tactics and Operations	4
	ENGW 3314	Advanced Writing in Arts, Media and Design	4	MATH 1241	Calculus	4
		Elective	4		Elective	4
		Total Hours	16		Total Hours	18
2026-27	5 Co-op Two July-December			ARCH 5140	Studio 7: Capstone Studio	6
				ARCH 5230	Structural Systems + recitation	4
				ARCH 3370	Adv. Topics in Architectural History	4
					Elective	4
					Total Hours	18

BS ARCH Total Semester Hours: 142

M. Arch 1-year

	Fall Semester			Spring Semester		
2027-28	ARCH 7120	Integration Studio	6	ARCH 7140	Master's Degree Project	6
	ARCH 7220	Integrated Building Systems	4	ARCH 6340	Graduate Topics in Architecture	4
	ARCH 7430	Research Methods in Architectural Design	4	ARCH 6440	Case Studies 2	4
		Grad Elective*	4			
		Total Hours	18		Total Hours	14

M Arch 1 Total Semester Hours: 32

*1 Elective required in MArch, may be taken Fall or Spring

Master of Architecture, 1-year Program
M. Arch Class of 2027

Catalog year 2026
Updated: 10/24/2023

	September-December Fall Semester			(January-April) Spring Semester		
	Course Number	Course Name	Credit Hours	Course Number	Course Name	Credit Hours
2026-27	ARCH 7120	Integration Studio	6	ARCH 7140	Master's Degree Project	6
	ARCH 7220	Integrated Building Systems	4	ARCH 6340	Graduate Topics in Architecture	4
	ARCH 7430	Research Methods in Architectural Design	4	ARCH 6440	Case Studies 2	4
		Grad Elective*	4			
		Total Hours	18		Total Hours	14

*1 Grad Elective is required in the MArch 1, and may be taken in the Fall or Spring

Subject Totals:		
	Studio	12
	Technology	4
	Practice/Research	12

M Arch 1 Total SH: 32

Master of Architecture, 2-year Program
M. Arch Class of 2027

Catalog year 2025
Updated: 1/24/2023

	September-December Fall Semester			(January-April) Spring Semester		
	Course Number	Course Name	Credit Hours	Course Number	Course Name	Credit Hours
2025-26	ARCH 6115	Grad Studio: Urban Architecture Studio	6	ARCH 5115	Studio 6: Option Studio	6
	ARCH 5210	Environmental Systems (+ recitation)	4	ARCH 5430	Intro to Professional Practice in Architecture	4
	ARCH 5310	Design Tactics	4	ARCH 5330	Architectural and Urban Theories	4
		Grad Elective*	4	ARCH 5230	Structural Systems (+ recitation)	4
		Total Hours	18		Total Hours	18
2026-27	ARCH 7120	Integration Studio	6	ARCH 7140	Master's Degree Project	6
	ARCH 7220	Integrated Building Systems	4	ARCH 6340	Graduate Topics in Architecture	4
	ARCH 7430	Research Methods in Architectural Design	4	ARCH 6440	Case Studies 2	4
		Grad Elective*	4			
		Total Hours	18		Total Hours	14

*2 Grad Electives are required in the MArch 2, and may be taken in the Fall, Spring, or Summer

Subject Totals:		
	Studio	12
	Technology	4
	Practice/Research	12

M Arch 2 Total SH: 68

Master of Architecture, 3-year Program
M. Arch Class of 2027

Catalog year 2024
Updated: 2/9/2023

	September-December Fall Semester			(January-April) Spring Semester		
	Course Number	Course Name	Credit Hours	Course Number	Course Name	Credit Hours
2024-25	ARCH 6100	Grad Skills Studio	6	ARCH 6200	Grad Studio 1	6
	ARCH 5340	Architectural and Urban Histories	4	ARCH 2340	Modern Architecture (+ recitation)	4
	ARCH 2240	Architectonic Systems	4	ARCH 3450	Advanced Architectural Communcations	4
		Grad Elective*	4	ARCH 6340	Grad Elective*	4
		Total Hours	18		Total Hours	18
2025-26	ARCH 6115	Grad Studio: Urban Architecture Studio	6	ARCH 5115	Studio 6: Option Studio	6
	ARCH 5210	Environmental Systems (+ recitation)	4	ARCH 5430	Intro to Professional Practice in Architecture	4
	ARCH 5310	Design Tactics	4	ARCH 5330	Architectural and Urban Theories	4
		Grad Elective*	4	ARCH 5230	Structural Systems (+ recitation)	4
		Total Hours	18		Total Hours	18

*1 Elective required in MArch, Fall or Spring

2026-27	ARCH 7120	Integration Studio	6	ARCH 7140	Master's Degree Project	6
	ARCH 7220	Integrated Building Systems	4	ARCH 6340	Graduate Topics in Architecture	4
	ARCH 7430	Research Methods in Architectural Design	4	ARCH 6440	Case Studies 2	4
		Total Hours	14		Total Hours	14

*3 Grad Electives are required in the MArch 3, and may be taken in the Fall, Spring, or Summer

Subject Totals:		
	Studio	12
	Technology	4
	Practice/Research	12

M Arch 3 Total SH: 100

CAMD Cover Sheet
Proposals for Course and Program Proposals and Revisions

Please include this one-page cover sheet with your submissions. Review the Required Documentation for a complete explanation of the information and documentation required with each submission.

Instructions
With the exception of the Department Vote Information, all sections are completed by the faculty member making the proposal. The vote information will be added by the chair or designee when the chair's signature is added.

Submission Type	Curriculum Type
Revision*	Course

Program Title *or* Course Number and Title	
As Proposed	ARCH 7430: Research Methods in Design
***Previous**	If revising a program or course title, enter the previous title.

Summary of what is being proposed (for revisions, summarize what is being changed):
The course will replace the existing course, ARCH 7130: Master's Research Studio, which is currently offered in the final year of the Master of Architecture program. Starting in the Fall of 2026, this course, the first part of the Master's Research Project, will be taught as a methods seminar rather than a studio. Additionally, the revision is intended to open the course enrollment to all CAMD graduate students, particularly those in the PhD program, to fulfill research methods requirements, and we intend to work with the graduate faculty across CAMD to assess those needs. The course syllabus and learning outcomes have been modified to reflect this, as well as a reduction of credit hours from 6.0 to 4.0. This proposal revises the curriculum of the 6-credit ARCH 7130, into a new course, a research methods seminar. This is a key part of our M. Arch. program revision, which will allow all students to take an extra studio course. Please note: This course is still in-development, and to that end, the syllabus is a work in progress. The course won't be taught for a few years, though it needs to be in place for the catalog.

Brief rationale/justification for this proposal:
This new course serves two purposes. The first, is that in order to allow students to choose a plan-of-study that is best suited for their goals and needs, the School of Architecture has opted to add a 4-year track to our BS Architecture program. In assessing the overall curriculum, and how a new 4-year plan-of-study can work in parallel to a revised 5-yr plan-of-study, the SoA proposes to reorganize some elements of the curriculum to achieve additional learning outcomes. One specifically identified goal was allowing students that opt for the M. Arch. 1 track (a one-year Master's degree available to our own BS Architecture students) to take an extra studio at the graduate level to explore specializations/interests. The second is to also provide students in our M. Arch. 2 and M. Arch. 3 tracks space in the curriculum to take an extra graduate studio to reinforce technical skills and similarly explore specializations and interests.

Program and Requirement Placement (*New Course proposals only*):
N/A

CAMD Cover Sheet
Proposals for Course and Program Proposals and Revisions

Course equipment, technology, or software request for MSO (*New and Revised Course proposals only*):
We do not anticipate any special equipment, technology, or software needs

Co-op Impact Statement (*New Program proposals only*):
N/A

Humanics: The integration of data, technology, and human literacies	
☐	Check this box if this course or program proposal should be tagged as humanics. If so, please provide a brief description of how this proposal is a humanics course/program.
N/A	

Course Enrollment Planning	
Planned Max Enrollment per section*: 14	Expected total enrollments per year: 50-60
**UG Course max enrollment expectations: 1000-level @ 60+, 2000- & 5000-level @ ~49, otherwise @ 19*	

Combined Major Course Distribution	
Number of courses in discipline 1: N/A	Number of courses in discipline 2: N/A

Department Vote Information (if applicable for change type by department policy/procedures)					
Vote Date: n/a	Total # of members: #	Yes: #	No: #	Abstain: #	Absent: #

Chairperson Approval Signature *(click the small image icon to attach an image of signature)*	**Date**
	02/06/2023

Course Proposal for ARCH 7430: Research Methods Seminar

Credits: 4.0, Fall Semesters Only

Course Description

This course introduces all CAMD graduate students to research methods for design that they can apply to capstone, thesis, or dissertation work in your major. For M.Arch. and MDes-SUEN students, this course is the first part of the yearlong research studio sequence, this semester will culminate in a fully developed capstone project proposal you will embark upon in ARCH 7140. In the first half of the semester, students will be introduced to a suite of research methods for design with applied exercises for deeper understanding. In the second half of the semester, students will begin to formulate a specific research question and a literature review and research prospectus specific to their program for feedback and further development.

All interventions into the built environment have a reciprocal relationship with their context, requiring preliminary and rigorous investigation in the pre-design phase. This study of architecture, landscape architecture, and urban planning often requires mixed methods adapted from the fields of social science, environmental sensing, archival investigation, and spatial analytics, depending on the particular questions you are asking and issues you are trying to address. In your final year of study and in your professional life, you will often be asked to uncover and make visible layers of the built environment, understand stakeholder needs, and ask critical questions as well as interpret and visualize both qualitative and quantitative data. The results of your research should have spatial implications, but ultimately we are more interested in how you synthesize the breadth of your education you have received here thus far to construct new lenses on the conceptions of sustainability, resilience, and social justice in design. Focusing on a research topic is an iterative process, and as such you will be returning to your own research interests and literature periodically through the semester. You will also be expected to actively engage with your peers through discussions, presentations, and reviews, and ultimately confront challenges of environmental and social justice innovatively, expansively, and humanely through design.

Shared Values

Northeastern School of Architecture is committed to foundational shared values of the discipline and profession listed below and while each course embodies multiple criteria, the primary goal of this course is to understand how architects create and disseminate knowledge focused on design and the built environment in response to ever-changing conditions. New knowledge advances architecture as a cultural force, drives innovation, and prompts the continuous improvement of the discipline.

NEU SoA Shared values include Design, Environmental Stewardship and Professional Responsibility, Equity, Diversity, and Inclusion, Knowledge and Innovation, Leadership, Collaboration, and Community Engagement and Lifelong Learning, all of which should be embodied in your project proposal.

Prerequisites:

Course Format:

Class meets once a week. Class will begin with a lecture or panel given by the course coordinator to all sections, after which students will meet in sections for readings discussion, applied exercises, or project development. Some applied workshops will take up the whole session.

Learning Outcomes

By the end of this semester you should be able to:

- Identify opportunities, challenges, and research questions that can be addressed through built interventions, communications, and/or other forms of design
- Write a short literature review with appropriately vetted primary and secondary sources
- Understand strategies and tools that can inform the design process
- Apply appropriate spatial and analytical methods
- Describe built environment and societal challenges presented by climate change and resilience strategies that are utilized to address them
- Understand methods and ethics of public engagement for design

Program Criteria Met

PC.5 Research and Innovation—How the program prepares students to engage and participate in architectural research to test and evaluate innovations in the field.

PC.6 Leadership and Collaboration—How the program ensures that students understand approaches to leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and learn how to apply effective collaboration skills to solve complex problems.

PC.8 Social Equity and Inclusion—How the program furthers and deepens students' understanding of diverse cultural and social contexts and helps them translate that understanding into built environments that equitably support and include people of different backgrounds, resources, and abilities.

NAAB Student Criteria Met:
SC.1 Health, Safety, and Welfare in the Built Environment—Demonstrates that students understand the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities.

SC.3 Regulatory Context—Demonstrates that students understand the fundamental principles of life safety, land use, and current laws and regulations that apply to buildings and sites in the United States, and the evaluative process architects use to comply with those laws and regulations as part of a project.

Course Requirements

Research Protocols Guide (30%) – create a graphic, comprehensive guide to how each of the methods introduced in the first half of the class would be applied to your research question and their relationship to each other in producing new or synthesized knowledge

Literature Review (20%) – write a short literature review of 10-15 vetted, high-quality sources and create a graphic map of the terrain of knowledge they contribute to your proposal

Initial Analysis and Prospectus (40%) – in the final week of class, you will present your project proposal to the course coordinator and research studio faculty. That proposal will include a) your primary research question; b) methods used to address your question; c) precedents and case studies for your intervention; d) project scope and timeline; e) initial analyses; f) schematic design diagrams

Participation (10%) - I ask that you maintain **engagement** in the class and aim for **personal progress** over the course of the semester. **Engagement** means how prepared you are each week for discussion and giving peer feedback. **Personal progress** means your projects are not compared to anyone else in the class, rather you are evaluated on how much you have worked to hone and refine your personal representation skills over the course of the semester. These will be reflected in the evaluation of your individual assignments and final grade.

Required Texts:

- Groat and Wang, *Architectural Research Methods*. New York: John Wiley and Sons, 2013.
- Kopec, Sinclair, and Matthes. *Evidence-based design: A Process for Research and Writing.* Boston: Prentice Hall, 2012.
- Deming and Swaffield, *Landscape Architecture Research: Inquiry, Strategy, Design.* New York: John Wiley and Sons, 2013.
- Cranz, *Ethnography for Designers.* London: Routledge, 2016
- Gehl and Svarre, *How to Study Public Life*. Washington: Island Press, 2013.
- Booth et al., *The Craft of Research*. Chicago: University of Chicago Press, 2016.
- Zeisel, *Inquiry by Design : Environment/behavior/neuroscience in Architecture, Interiors, Landscape, and Planning.* New York: W.W. Norton & Company, 2006.

Preliminary Course Schedule

Week 1: Introduction to Course, Faculty, and Research Studios, Assignment 1: Research Protocols Guide Given

Week 2: Measuring Performance (Presentation): Participant Observation, Correlational Research, Post-Occupancy Evaluations

Week 3: Methods from Social Science (Presentation): Interviewing, Oral Histories, and Surveys

- William Whyte, *The Social Life of Small Urban Spaces*, (Film and Reading)
- Linda Groat and David Wang, "Correlational Research," from *Architectural Research Methods*
- Dan Lockton, Design with Intent cards,
- Galen Cranz, "Translating into Physical Design," from *Ethnography for Designers*
- Dak Kopec, "Surveys, Interviews, and Observations," from *Evidence Based Design*
- M. Ellen Deming and Simon Swaffield, "Interpretive Strategies," from *Landscape Architecture Research*

Week 3: Methods of Public Engagement (Panel and Workshop)

- Sherry Arnstein, "A ladder of citizen participation." *Journal of the American Institute of Planners* 35 (1969)
- David de la Pena, et al., "Introduction" and "Experting: They Know, We Know, and Together We Know Better, Later" from *Design as Democracy: Techniques for Collective Creativity*, Seattle: Island Press, 2017.
- "What is Community-Engaged Design?" (Center for Urban Pedagogy Panel, 2020)

Week 4: Methods of Environmental Sensing and Building Science (Panel and Workshop)

Week 5: Ethics in Design Research (Panel and Discussion), Project Development

- Langdon Winner, "Do Artifacts Have Politics?", *Daedalus*, 1980.
- Nicholas Brown, "(Un)broken Pedagogies for (Un)broken Worlds," *Journal of Architectural Education*, 2022.
- Christopher Schell, et al. "The Ecological and Evolutionary Consequences of Systemic Racism in Urban Environments." *Science,* 2020
- Shalanda Baker, "Anti-Resilience: A Roadmap for Transformational Justice Within the Energy System." *Harvard Civil Rights-Civil Liberties Law Review*, 2019.

Week 6: Assignment 1: Research Protocols Guide Due; Assignment 2: Literature Reviews Given
Methods from Historical Research (Panel and Discussion), Literature Reviews and Vetting Sources

- Jules David Prown, "Mind in Matter: An Introduction to Material Culture Theory and Method," Winterthur Portfolio 17:1 (Spring 1982): 1-19,
- Patricia Kain, "How to Do a Close Reading" (Writing Harvard Center)
- "Discourse Analysis," from *Keywords in Qualitative Methods*
- M. Ellen Deming and Simon Swaffield, "Interpretive Strategies," from *Landscape Architecture Research*

Week 7: Library and Archival Research Module (Snell Library)

- Graff and Birkenstein. *"They Say / I Say": the Moves That Matter in Academic Writing.* New York: W.W. Norton & Company, 2018.

Week 8: Case Study Methods and Writing Concisely

- Linda Groat and David Wang, "Case Studies and Combined Strategies," from *Architectural Research Methods*
- Mark Francis, "A Case Study Method for Landscape Architecture," Philadelphia: Landscape Architecture Foundation, 2019

Week 9: First Draft of Assignment 2: Literature Review Due, Project Proposal Guidelines Given

Week 10: Spatial Analysis/Mapping Workshop

Week 11: Project Development and Feedback Session

Week 12: Project Development and Feedback Session

Week 13: Project Development and Feedback Session

Week 14: Final Presentations and Literature Review Due

Tenure/Tenure Track Appointments

Marie Law Adams

Associate Professor

Marie Law Adams is an architect and co-founder of Landing Studio, an architecture and urban design practice focused on the design of just and sustainable infrastructure. Landing Studio was formed in 2005 with the Rock Chapel Marine project, a shared-use road salt terminal and public park landscape located in an immigrant community just north of Boston. While working intensively in this community during the first ten years of practice, Landing Studio also studied salt production facilities across the globe. Through this parallel global field work and local practice, Landing Studio documented ways that seemingly standardized spaces of production and infrastructure could be shaped by local places and people. This understanding serves as the foundation for Marie's ongoing work, where she looks to bring local voices, new dimensions of human delight and comfort, and natural systems to everyday infrastructural spaces. Marie has been lead designer on projects ranging from public access landscapes under highway viaducts, to public parks within public works yards, and building designs ranging from industrial operations headquarters to community centers.

Marie's work has been recognized with national and international awards, including the Architectural League of New York's Emerging Voices award, the Architectural League Prize, a Holcim Award, and a Progressive Architecture Award. The work has also been exhibited at institutions in the United States and internationally. Marie earned a BSArch from the University of Michigan and an MArch from MIT where she was a Presidential Fellow and recipient of the AIA Medal. Before joining Northeastern University, Marie taught urban design and architecture at MIT and the Rhode Island School of Design.

Education

- M.Arch., MIT
- BSArch, University of Michigan

Killion Mokwete

Assistant Professor

H. Killion Mokwete teaches design studios across undergraduate and graduate thesis research. His teaching leverages community-based learning approaches through engaging with local communities both in Boston and internationally where his professional practice and research lies. His studios have travelled and engaged with community partners in Haiti, and locally his students continue to partner with neighboring community groups in Roxbury, Dorchester, East Boston and Lynn. He has previously taught place-based studios at Mass Art and community practice studios at the Boston Architectural College (BAC).

Killion's academic research is focused on the preservation of building heritage in urban settlements in Sub-Saharan Africa through leveraging digital 3D terrestrial LiDAR scanning technology and community social participation to create digital databases that act as preservation and education platforms. This interdisciplinary research is currently being piloted in collaboration with research partners at Northeastern University and local researchers in Benin in the city of Porto-Novo.

Prior to Northeastern, Killion studied at the Architectural Association (AA) of London and practiced there with various firms before re-locating to his native home country of Botswana. Killion's international practice experience spans work across different continents, having worked on projects in the UK, Greece & Russia while practicing in London. While in Botswana, he worked on urban design projects in both Botswana and Ghana. In the US, he has practiced with Shepley Bulfinch on projects in Rwanda, and while at Build Health International (BHI) he worked on projects with community partners in Haiti before co-founding the not-for-profit design practice Adaptiv, and recently has co-founded the benefit corporation startup firm Social Impact Collective Inc.

Education

- M.A., Architecture + RIBA Part III (Chartered Architect), Portsmouth University, Portsmouth, UK
- M.A., Architecture + RIBA Part III (Chartered Architect), Portsmouth University, Portsmouth, UK
- B.A., Architecture + RIBA Part I, University of Plymouth

Carlos Sandoval Olascoaga

Assistant Professor

Carlos Sandoval Olascoaga is Assistant Professor of Human-Computer Interaction (HCI) and Inclusive Design at the School of Architecture at Northeastern University and Affiliate Assistant Professor at Khoury College of Computer Sciences at Northeastern University. Carlos is Visiting Scientist at MIT, where he was previously Postdoctoral Associate and Lecturer with a joint appointment between the Department of Architecture and the Schwarzman College of Computing. His work combines design, computing, urban data and public service to provide formal computational design methods that allow the broadest set of community members to shape their own environments equitably and holistically with the support of computational intelligence.

His research focuses on developing information models that enable concurrent design collaboration, computational interfaces for accessible multi-user design, and decision-making algorithms for large-scale design synthesis. Carlos' current book project uncovers the computational and political history of computational tools for design and geocomputing and provides a critical framework to develop design tools to support community participation in design. His work has been supported by the Norman B. Leventhal City Prize, the Autodesk IDEA Studio Award, the MIT Presidential Fellowship, and the Jumex Foundation for Contemporary Arts Fellowship, among others. Carlos received a PhD from MIT, a MS in Computation with distinction from MIT, a M.Arch from UC Berkeley and a B.Arch with distinction from National Autonomous University of Mexico.

Education

- Ph.D., Design and Computation, MIT
- M.S.,Computation, MIT
- M.Arch., UC Berkeley
- B.Arch., National Autonomous University of Mexico (UNAM)

Tenure / Tenure Track - Partial Appointments

Sara Hendren

Associate Professor, (50% appointment in Architecture)

Sara Hendren is an Associate Professor in Art + Design with a joint appointment in the School of Architecture. She works in the area of Extraordinary HCI and Inclusive Design. She is a humanist in tech—an artist, design researcher, and writer about the extended and augmented body in public space.

Her book What Can A Body Do? How We Meet the Built World explores the places where disability shows up in design at all scales: assistive technology, furniture, architecture, urban planning, and more. It was named one of the Best Books of 2020 by NPR, a finalist for the Massachusetts Book Award, and won the 2021 Science in Society Journalism book prize. She has been a National Fellow at the New America think tank, and her work has been supported by an NEH Public Scholar grant, residencies at Yaddo and the Carey Institute for Global Good, and an Artist Fellowship from the Massachusetts Cultural Council.

Sara's art and social design works have been exhibited on the White House lawn under the Obama administration, at the Seoul Museum of Art, the Victoria & Albert Museum, the Vitra Museum, and many others, and her work in held in the permanent collections at MoMA and the Cooper Hewitt. Her criticism and commentary have appeared in the New York Times, Wired, Art in America, and elsewhere.

Sara comes to Northeastern after nine years at nearby Olin College of Engineering, where she was the Principal Investigator on a four-year initiative called Sketch Model, bringing more arts and humanities experiences to engineering students and faculty, supported by the Mellon Foundation.

Education

- MDes, Harvard Graduate School of Design
- MA, Cultural and Intellectual History, UCLA
- BA, Visual Arts, Wheaton College

Carmen Hull

Assistant Professor (25% appointment in Architecture)

Carmen is an Assistant Professor of Information Design and Data Visualization with a joint appointment in the College of Arts, Media, and Design and Architecture. She takes inspiration from her background in film and architecture to make physical and immersive data visualizations and tools, emphasizing generative design, visual cognition, and information visualization principles. She received her PhD at the University of Calgary in Computational Media Design and has taught in art, engineering, human computer interaction, and data science departments. Previous work on large-scale urban design and architectural projects inspired her research on immersive data visualizations that leverage our inherent spatial intelligence and embodied sensemaking abilities. Her projects included a 3D interactive tabletop model visualizing energy use data for a university campus, a patented generative design extension for Tableau Software, and a large-scale installation visualizing global gender gap statistics that is slated for exhibition at the UN in Geneva in 2023.

Carmen is a recipient of the prestigious AITF scholarship and has presented her research at CHI, VIS, and the Women in Data Science event. She has been profiled in IEEE Computer Graphics and Applications and was selected an Innovator for Change in 2021. Her work has been published in top-tier journals such as ACM SIGCHI, IEEE VIS, and CG+A Journals.

Her current research directions include generative and machine learning systems for data visualization, spatial intelligence and visual cognition, and telling stories with data through multiple modalities, domains, and scales.

Education

- PhD, Computational Media Design, University of Calgary
- M.Arch., University of Calgary

José R Menéndez López

Assistant Professor (25% appointment in Architecture)

José R. Menéndez is a graphic designer and educator, with a background in marine science communication and landscape architecture. His multi-disciplinary practice, research, and teaching are intertwined as he investigates topics such as community engagement through health communication and social justice; expanding the canons of graphic design by highlighting Latin American and Caribbean practices; and designing spatial justice and ecological narratives in the landscape.

Through the lenses of experimental publishing, printmaking, branding, exhibit design, public space interventions, and climate visualizations, José's work examines the design practice as a platform for multilingual communication, dissemination, access, visibility, equity, and justice at multiple scales.

José is a founding partner at Buena Gráfica Social Studio, a Design and Print Studio in Providence, RI. He is a recipient of a 2020-2022 National Endowment for the Arts Grants for Arts Project, a board member of the Community Built Association and a member of the Fine Arts Work Center's advisory board.

Education

- Master of Fine Arts in Graphic Design—Rhode Island School of Design Providence, RI
- Master of Science in Marine Affairs—University of Rhode Island Kingston, RI
- Bachelor of Science in Landscape Architecture —Temple University Philadelphia, PA

Ettore Santi

Assistant Professor, (75% appointment in architecture)

Ettore Santi is a Postdoctoral Research Associate and incoming Assistant Professor with a joined appointment in the School of Architecture and in the Department of Cultures, Societies, and Global Studies. Ettore's scholarship bridges design research with debates in rural geography, agrarian political ecology, and the environmental humanities.

His current book project "Designing a Land Revolution: The Corporate Reinvention of China's Rural Environment" offers an ethnographic account of how architects, planners, and state experts are redesigning China's rural villages into spaces for agribusiness food extraction and ecotourism. This project received support from the Mellon Foundation and the Luce Foundation at the American Council of Learned Societies, the Mellon Foundation at the Social Sciences Research Council, the Graham Foundation, and China's National Science Foundation.

Ettore's design pedagogy addresses socioecological challenges emerging in rural areas of the United States and globally. He designed and taught courses in partnership with community groups in rural California and New England, taking over issues related to agribusiness expansion, food extraction, water scarcity, Indigenous politics, seasonal immigrant farm labor, and rural homelessness.

Ettore holds a Ph.D. in Architectural History and Theory from UC Berkeley, a M.Arch from Tongji University of Shanghai and a M.Arch from Polytechnic University of Milan. He has worked as a designer, consultant, curator, and educator in China, Italy, and the United States.

Education

- Ph.D., UC Berkeley, Architecture (History, Theory, and Society)
- M.Arch., Tongji University, Shanghai
- M.Arch., Polytechnic Institute of Milan

Non-Tenure Track Faculty

Lori Ferriss

Visiting Assistant Professor / Design Research and Teaching Fellow

Lori Ferriss is a global leader in sustainable stewardship of the built environment. Her award-winning work as an architect, structural engineer and conservator combines broad policy development with deep technical insights to promote a culturally and environmentally sustainable world through design. As a Principal at Boston-based design firm Goody Clancy, she founded the Regenerative Renewal practice that is re-envisioning architecture at the intersection of decarbonization and heritage.

Lori's research explores the co-benefits of activating the existing built environment as a climate solution. Her work establishing carbon accounting methods for historic buildings has been featured in publications ranging from the Journal of Architectural Conservation to Architect Magazine and presented on-stage at the UN COP27 climate conference. She is a co-developer of Architecture 2030's CARE Tool, which estimates the carbon benefits of reusing and retrofitting buildings for designers, owners, planners, and policymakers.

Lori is the 2023 Chair of the AIA Committee on the Environment, a Steering Committee representative of the Climate Heritage Network, an expert member on the ICOMOS International Scientific Committee on Energy, Sustainability and Climate Change, and a Senior Fellow of Architecture 2030.

Education

- M.A., Engineering in High-Performance Structures, MIT
- B.S., Architecture, MIT

Sara Hayat

Visiting Assistant Teaching Professor

Sara Hayat received her doctoral degree in the history of architecture at Brown University. Her research focuses on architecture and politics in post-World War 2 Germany. Her current projects investigate American government buildings in postwar Germany and East German architectural theories. She has taught courses on architecture and urban planning at various institutions, including The Rhode Island School of Design (RISD) and the School of the Art Institute of Chicago (SAIC).

Education

- Ph.D. History of Art and Architecture, Brown University
- M.Arch. Architectural Research, University of Miami, School of Architecture
- Professional B.Arch., University of Miami, School of Architecture

Sarah Hirschman

Visiting Associate Teaching Professor, Mills College

Sarah Hirschman is a partner in the California-based architecture practice Object Projects. She has taught design studios at UC Berkeley, The Ohio State University, the Boston Architectural College, and MIT, where she received her M.Arch. She holds an M.A. in Modern Culture and Media and a B.A. in Semiotics from Brown University.

Education

- M.Arch, MIT
- MA, Modern Culture and Media, Brown University
- BA with Honors, Brown University

Silvia Illia-Sheldahl

Associate Teaching Professor

Born and raised in Cordoba, Argentina, Silvia completed a Bachelor of Architecture degree at Universidad Catolica de Cordoba. In 2001, she moved to Boston and worked with Merge Architects, Brian Healy Architects, Utile, and Sasaki. In 2010, she received her master's degree from Harvard Graduate School of Design. Shortly after, in 2014, she and Paxton Sheldahl co-founded BOS|UA, an award-winning practice located in Cambridge, MA.

Silvia's teaching approach has a dual focus; it taps into the study of the creative process itself and on issue-driven projects as catalysts for a design agency, where architecture can become a vehicle for positive change. As an educator, Silvia aims to provide students with guidance and tools to unleash fearless thinkers and makers. As a practitioner, she believes we must become instrumental in framing and communicating complex topics that affect our realities today by promoting change from the bottom up. These goals are at the core of her teaching pedagogy that promotes observation, analysis, and critical thinking through making, engaging all aspects of the architectural project. Silvia believes in creating a diverse culture of inquiry and exploration of global issues within local conditions, with every studio and project, fostering engagement between creative individuals and their socio-political contexts.

Education

- Master in Architecture, Graduate School of Design – Harvard University
- Bachelor in Architecture, Universidad Catolica de Cordoba – Cordoba, Argentina

Alex Krieger

Distinguished Professor of the Practice

Alex Krieger, FAIA, is an architect and urban designer whose career has combined teaching and practice in working to improve the quality of place in major urban areas. He is a founding principal of Chan Krieger Sieniewicz, a design firm established in 1984 that spanned the disciplines of architecture, urban design, and public space planning, and merged with NBBJ in 2010. With a focus on educational, institutional, public, and health-care projects in complex urban settings, the firm has received dozens of national and regional awards. He is a frequent advisor to mayors and their planning staffs, and has served on many civic boards and public commissions such as the Boston Civic Design Commission, the Providence Capital Center Commission, the Large City Planners Institute, and the Joseph Riley Institute.

Mr. Krieger taught as a professor at the Harvard Graduate School of Design since 1977. He served as associate chairman of the Department of Architecture from 1984 to 1988, and as director of the urban design program from 1990 to 2001, and twice as chairman of the Department of Urban Planning and Design. He was honored as an outstanding teacher at Harvard University in 2003, 2005, and 2007. He has written and edited several books and essays on American cities, including A Design Primer for Towns and Cities (1990), Mapping Boston (1999), Remaking the Urban Waterfront (2004), and Urban Design (2009). He is a graduate of Cornell University and Harvard University; he served as an advisory director of the Mayor’s Institute on City Design of the National Endowment for the Arts, and continues to serve as a design peer reviewer for the U.S. General Services Administration. He is a Fellow of the American Institute of Architects.

Zorana Matić Isautier

Visiting Associate Teaching Professor

Dr. Zorana Matić's work is multi-scalar and nested in intersections of design, human behavior, and health & well-being. She examines how people, built environment, and our behavioral choices interrelate and aims to develop design solutions that support health, improved experience, better communication, teamwork, efficiency, and automate safer behavior. In addition to urban-based research, she also examines how space and design impact individual experience and health and organizational outcomes at the level of a building or a single hospital unit. Her work on the role of design in infection control and supporting healthcare workers' safety was published in leading peer-reviewed medical and design journals. Dr. Matić received the 2020 Researcher of the Year Award (The Center for Health Design).

Previously, Matić was a Lecturer in Urban Design at the Georgia Institute of Technology (College of Design), an Adjunct Faculty at the Boston Architectural College (BAC), and a Future Faculty Fellow at Northeastern University. Dr. Matić serves on the Foundation for Health Environments Research (FHER) Board as a Co-Chair of the Research Grants Committee.

Dr. Matić received her B. Arch and M. Arch. Degree (Architecture and Urban Studies) from the University of Belgrade, Serbia, and a Ph.D. in Architecture from The Georgia Institute of Technology, where her dissertation was supported by the School of Architecture Ph.D. Fellowship and selected for the 2018 EarthShare award by the Architecture Foundation of Georgia.

Education

- Ph.D., Georgia Institute of Technology, Architecture
- M.Arch., University of Belgrade, Urbanism and Urban Planning
- B.Arch., University of Belgrade, Faculty of Architecture

Peter Minosh

Visiting Associate Teaching Professor

Peter Minosh is a historian of architecture, urbanism, and landscape with a focus on the relationship between politics and the built environment. His research considers architecture's modernity in relation to formulations of sovereignty and revolutionary and decolonizing movements from the enlightenment to the present. A particular focus of this research is on the modern confluence of racism, environmental change, and liberal economics across the eighteenth-century Atlantic World. His book "Atlantic Unbound: Architecture in the World of the Haitian Revolution" is under contract with the University of Pittsburgh Press. It takes the French, American, Haitian Revolutions to be a single transnational phenomenon and considers ways that architecture negotiates its revolutionary imaginaries – particularly regarding race, slavery, and sovereignty.

Minosh received his PhD in Architectural History and Theory from Columbia University and has taught architectural history at Oberlin College and the University of Toronto. His writing has appeared in the Journal for the Society of Architectural Historians, The Politics of Space and Place, Race and Modern Architecture, Writing Architectural History, and The Burlington Magazine. He has been involved in several research projects, including the Aggregate Architectural History Collaborative and The Race and Modern Architecture Project.

Education

- Ph.D. Columbia University
- S.M.Arch.S. Massachusetts Institute of Technology
- B.Arch. Rensselaer Polytechnic Institute

Kiel Moe

Distinguished Professor of the Practice

Kiel Moe, FAIA, FAAR, is a practicing architect, researcher, and author. In recognition of his design and research endeavors, he was awarded a Fulbright Distinguished Chair in Helsinki, the Gorham P. Stevens Rome Prize in Architecture at the American Academy in Rome, the Architecture League of New York Prize, and the American Institute of Architects National Young Architect Award. He has published several books on architecture including Empire, State & Building; Wood Urbanism: From the Molecular to the Territorial; Insulating Modernism: Isolated and Non-Isolated Thermodynamics in Architecture; and Convergence: An Architectural Agenda for Energy.

Education

- MDesS, Architecture, Harvard University
- M.Arch., University of Virginia
- B.Arch., University of Cincinnati

Emmanuel Osorno

Design Research and Teaching Fellow

Emmanuel Osorno is an architect, educator, and the founder of eoStudio. His work explores the role of images and objects in the perception of place, seeking to recalibrate long held notions of societal issues that intersect with architecture. He was the inaugural Architecture and Social Innovation Fellow at the Tulane University School of Architecture and a member of the Dean's Equity and Inclusion Initiative (DEII). Osorno has practiced professionally at Eric Owen Moss Architects in Culver City, CA, where he was involved in the design and construction of renowned projects. Osorno holds a post-professional Master of Architecture from Princeton University, a Bachelor of Architecture from Cal Poly San Luis Obispo, and is a registered architect in the state of California.

Education

- M.Arch., Princeton University
- B.Arch., Cal Poly, San Luis Obispo

Alejandro Saldarriaga Rubio

Design Research and Teaching Fellow

Alejandro Saldarriaga Rubio is a Colombian designer known for his work in architecture and ephemeral design. Born and raised in Bogota, Colombia, Alejandro has had an international professional trajectory, having lived, and worked in various countries including Denmark, Switzerland, and the United States.

He holds a master's degree in architecture from the Harvard Graduate School of Design, where he honed his skills and developed his unique approach to design. In 2020, he founded his architecture practice, ALSAR-ATELIER, during the midst of the pandemic. The studio is dedicated to investigating low-cost and low-tech design solutions for global states of emergency, focusing on sustainable construction methods and community engagement.

Since its inception, ALSAR-ATELIER has produced a noteworthy line of projects work that has gained significant attention from local and international media. In 2023, ALSAR-ATELIER was included in the latest edition of Archdaily's Best New Practices.

Education

- M.Arch., Harvard Graduate School of Design
- Professional Architecture Degree, Universidad de los Andes

Bill Skinner

Visiting Assistant Teaching Professor

Bill Skinner specializes in the history of architecture and urban development in the Caribbean during the twentieth century. He examines how colonial welfare initiatives were articulated across the region through large-scale development projects during the postwar period. His current research centers on mass housing and town planning schemes in Barbados.

Education

- Ph.D., History of Art and Architecture, Brown University
- MA, History of Architecture, Cornell University
- BS, Industrial Design, University of the Arts

Humbi Song

Visiting Associate Teaching Professor

Humbi Song's work focuses on the intersection of design, technology, and interaction. She speculates on the possible futures of society and technology – on technologically-enhanced spaces and imagining new ways to interact with each other and with machines. Her research interests include Responsive Architecture, Digital Fabrication, Human-Computer Interaction, Kinetic Mechanisms, Electronics, Robotics, and AI.

She designs interactive installations that are responsive to human presence through electronics or kinetic movement. These architectural and sculptural works create sensory experiences through body-centric participation. As a fabricator, she specializes in using emerging technologies and techniques that blur the digital and the physical.

In research, she prioritizes interdisciplinary collaborations of architecture with psychology, sociology, engineering, and computation. Her prior research includes experiments using biometric sensing wearables to quantify the human spatial experience in urban environments, as mediated by emotions and memory formation.

Song has held faculty positions at the Harvard Graduate School of Design and Wentworth Institute of Technology. She held a Harvard-Cambridge Fellowship at the University of Cambridge, UK, and a Fabrication Residency at the Haystack Mountain School of Crafts. Song holds a Master's in Architecture from the Harvard GSD and a B.A. from Harvard College in Social Studies and a secondary field in History of Art and Architecture.

Education

- Harvard University, M.Arch
- Harvard College, B.A.

Administrative Staff

Jessica Marder

Administrative Officer and Graduate Program Manager

Jessica has a multi-faceted background working primarily in academic support and compliance positions. As a staff member at the Massachusetts General Hospital Institute for Health Policy she contributed to several scholarly public health articles, as well as providing administrative support to the Institute's director.

Since then, she has worked for various software technology companies focusing on Information Security auditing and compliance. Seeking to return to an academic environment, she joined the School of Architecture team in 2022 to provide administrative support and help manage the data collection projects associated with accreditation and new University requirements.