Architecture Program Report

The Stuart Weitzman School of Design

March 1, 2024

National Architectural Accrediting Board, Inc.

NAAB

Architecture Program Report (APR)

2020 Conditions for Accreditation
2020 Procedures for Accreditation

Institution	**University of Pennsylvania, The Stuart Weitzman School of Design**
Name of Academic Unit	Department of Architecture
Degree(s) *(check all that apply)* **Track(s)** *(Please include all tracks offered by the program under the respective degree, including total number of credits. Examples:* *150 semester undergraduate credit hours* *Undergraduate degree with architecture major + 60 graduate semester credit hours* *Undergraduate degree with non-architecture major + 90 graduate semester credit hours)*	☐ Bachelor of Architecture Track: ☒ Master of Architecture Track: 3-year graduate program requiring previous undergraduate baccalaureate Track: ☐ Doctor of Architecture Track: Track:
Application for Accreditation	**Continuing Accreditation**
Year of Previous Visit	2016
Current Term of Accreditation *(refer to most recent decision letter)*	Continuing Accreditation (Eight-Year Term)
Program Administrator	Rossana Hu, Chair, Architecture Department
Chief Administrator for the academic unit in which the program is located *(e.g., dean or department chair)*	Frederick Steiner, Dean, Weitzman School of Design
Chief Academic Officer of the Institution	John L. Jackson Jr., Provost
President of the Institution	J. Larry Jameson, Interim President
Individual submitting the APR	Andrew Saunders, Associate Chair, Director, M. Arch Program
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INTRODUCTION

Progress since the Previous Visit

The Conditions Not Met provided in response to the 5-year Interim Progress Report (IPR) submitted in 2021 are:

- After reviewing the five-year Interim Progress Report (IPR) for the Master of Architecture program submitted by University of Pennsylvania, the National Architectural Accrediting Board (NAAB) has rejected the IPR as not having corrected or demonstrated substantial progress toward addressing deficiencies identified in the most recent two-year Interim Progress Report. SPC A.7 is still Not Met. Student work submitted for Condition II.1.1. SPC: A.7 History and Global Culture does not demonstrate achievement at the prescribed level The History and Theory curriculum at Penn has undergone notable shifts in response to comments received from NAAB in the last accreditation period.

Program Response:

Conditions not met in the 2016 Visting Team Report (VTR) are as follows:

- A.7 History and Culture
- A.8 Cultural Diversity and Social Equity
- B.3 Codes and Regulations
- B.10 Financial Considerations

In response to Weitzman Architecture's Interim Progress Report the department was informed that articles A.8, B.3, and B.10 were addressed, however SPC A.7 is still "Not Met". Student work submitted for Condition II.1.1. SPC: A.7 History and Global Culture does not demonstrate achievement at the prescribed level. On December 15, 2023 a Plan to Correct was submitted by the department to exhibit enhancements made to the curriculum to bring it in compliance with SPC A.7. These enhancements to Weitzman Architecture's History and Theory sequence are also described herein.

Under the leadership of Dean Fritz Steiner and previous Chair Winka Dubbeldam, global faculty searches were conducted to augment our History and Theory faculty, and a long-term commitment was extended to Joan Ockman, Adjunct Professor, who continues to anchor the History and Theory curriculum. In addition to reframing all required courses within a worldwide perspective, a special focus has been placed on the historical and contemporary architecture of the Global South.

Daniela Fabricius, who has taught at Penn in an adjunct capacity since 2006, joined the faculty in 2022 as Assistant Professor and was followed with two additional full-time faculty appointments in 2023. Fernando Lara, who joined the faculty as Professor, works on theorizing spaces of the Americas with an emphasis on the dissemination of design ideas beyond traditional disciplinary boundaries. Vanessa Grossman, who joined the faculty as Assistant Professor addresses the intersections of architecture with ideology, housing, and governments, with focus on Cold War-era Europe and Latin America. Together, the faculty teaching in the core History/Theory sequence have worked to support and enrich Weitzman's overall goals.

Arch 5110 (History and Theory I), Arch 5120 (History and Theory II), and Arch 6110 (History and Theory III) have been expanded through this global focus, with each course adding new content. Understanding of the non-Western context is amplified through a range of assignments. In History and Theory I, retitled *History of Architecture from 1850 to WWII in Global Perspective*, a series of case studies beyond the US and Europe has been introduced; these include (for example) Jingfeng Railway Zhengyangmen East Station in Beijing (1904), Raimondo D'Aronco's Casa Botter in Istanbul (1900-1901), and Aarão Reis' plan of Belo Horizonte in Brazil (1894). The course's final written research paper, while giving students some latitude in selecting a topic,

requires that they place their topic into a global perspective. Assigned readings also have a greater global focus, with students' absorption of this material reflected in their weekly reading responses. Another innovation in the required H/T lecture classes, initiated in fall 2023, is the reduction in class size to forty students. (In the case of ARCH 5110 and ARCH 5120, this means that two parallel sections are taught.) This change has enhanced the student learning experience, allowing for more dialogue between professor and students in the lecture room.

The History and Theory faculty have also established a lunch-time lecture series with up to four invited speakers each semester. The lectures are coordinated with the content of the required H/T courses and are also open to the whole School. Care is taken to secure speakers who reflect a diverse range of architectural ideas and contexts. Speakers in fall 2023 included Paulo Tavares, Kadambari Baxi, Charles Davis II, and Daniel Talesnik.

The History and Theory sequence in the Master of Architecture program benefits greatly from teaching assistants drawn from Penn's Ph.D. Program in Architecture. Created in 1964, Penn's Ph.D. program is the oldest in the country and is widely regarded as among the preeminent doctoral programs in the fields of architectural theory, technology, and representation. The TAs in H/T courses work closely with MArch. students in 90-minute weekly recitations, where students give oral presentations on their case-study topics, discuss the week's lecture, and assigned readings, and receive feedback on their writing and research.

The vast, rare, and valuable collections of the Fisher Fine Arts Library and Architectural Archives are rich resources and major assets for the exploration and investigation of History and Theory subjects, not just for students but also for faculty and visiting scholars. Visits to the library and archives are integral to the core curriculum, where students directly learn the tools of primary and secondary research and get firsthand access to important drawings and models from the likes of Louis Kahn, Robert Venturi and Denise Scott Brown, Anne Tyng, and others. These resources immerse students in an exemplary scholarly and curatorial and conservation environment, and their value to the degree program cannot be overstated.

Program Changes

Program Response:
The changes made to the Penn's Graduate Architecture program since the last accreditation in 2015 are described throughout this report. Changes made in response to the revised 2020 Conditions for Accreditation include enhancements of the department's curriculum to better engage self-assessment, particularly with respect to student development surrounding Design Synthesis (SC.5) and Building Integration (SC.6) as well as shared values within the Department, Stuart Weitzman School of Design, and broader architectural community.

The emphasis on self-assessment in the 2020 Conditions added urgency to several initiatives already underway in Fall 2023. These include focused outreach to alumni with an emphasis on post-graduation career development; a culture survey of students, faculty, and staff; increased integration with the School's DEI goals supported by a multi-semester emphasis on *Public Commons*, a term used for shared, equitable access to resources such as air, oceans, and wildlife as well as to social infrastructures such as libraries, civic programs, and open spaces that relate directly to the impact and success of dense housing in the city; as well as a response to the University's updated strategic plan.

NAAB

1—Context and Mission

To help the NAAB and the visiting team understand the specific circumstances of the school, the program must describe the following:

The institutional context and geographic setting (public or private, urban or rural, size, etc.), and how the program's mission and culture influence its architecture pedagogy and impact its development. Programs that exist within a larger educational institution must also describe the mission of the college or university and how that shapes or influences the program.

Program must specify their delivery format (virtual/on-campus).

Program Response:

Setting within the University of Pennsylvania and Stuart Weitzman School of Design

In 1749, Benjamin Franklin organized 24 trustees to form an institution of higher education based on his proposals, which led to the creation of the University of Pennsylvania in 1751.

The University of Pennsylvania's academics are boosted by its inherent culture and ecosystem of innovation. Grounded in the liberal arts and sciences and enriched by the integrated resources of four undergraduate and 12 graduate schools, Penn offers students an unparalleled education informed by inclusivity, intellectual rigor, research, and the impetus to create new knowledge to the benefit of individuals and communities around the world.

Mission of the University

Environmental sustainability is a defining issue of the 21st century, and higher education increasingly plays a leadership role in addressing global climate change. Through the research, teaching, and operational practices articulated in its Climate and Sustainability Action Plan 3.0, Penn is dedicated to promoting a sustainable culture and implementing environmentally conscious policies. See https://www.sustainability.upenn.edu/resources/2019-24-climate-and-sustainability-action-plan-30-csap-30.

Mission of the Weitzman School of Design: The Values That Guide Us

The Stuart Weitzman School of Design prepares students to address complex sociocultural and environmental issues through thoughtful inquiry, creative expression, and innovation. As a diverse community of scholars and practitioners, the Weitzman School's is committed to advancing the public good—both locally and globally—through architecture, city and regional planning, the fine arts, historic preservation, landscape architecture, and urban spatial analytics. With 11 degrees and 15 certificates offered in an in-person teaching environment, Weitzman School graduate programs are consistently considered preeminent in the nation and serve as a platform for groundbreaking research as well as community engagement.

We are proud of our exceptional legacy of advancing design education, scholarship, and practice, and improving the quality of everyday life through design. We recognize that we should measure our success not just by what we do but by how we approach our work. The values and guiding principles below reflect our commitment to creating a culture of
trust, integrity, and fairness.

Respect: We treat each other with respect – faculty, staff, and students – regardless of background or position

Inclusion: We strive to create an inclusive environment, embracing difference and welcoming diverse perspectives

Belonging: We believe that everyone in our community should feel welcome, valued, and unafraid to ask questions or raise concerns

Support: We seek to foster a supportive community, celebrating our successes and learning from our mistakes

Courage: We encourage risk taking and exploring beyond established boundaries in pursuit of excellence
Collegiality: We believe in teamwork, recognizing that differences of opinion are constructive and should be addressed collegially and respectfully
Transparency: We are committed to frequent, open, and transparent communication
Justice: We recognize that some members of our community may experience unfair barriers or advantages and we make changes to ensure that everyone has access to equal opportunities.

Mission of the Department of Architecture
Weitzman Architecture is committed to educating the next generation of global leaders and thinkers in architecture to respond to the social, cultural, ecological, climate and technological challenges of our time. Through an interdisciplinary and transformative approach to design, scholarship, and practice, our diverse student community works with leading professionals and scholars to explore and imagine the limits of the discipline's relevance. We challenge past norms to "deepen connections with neighbors and the world" so that we may serve and build a just and thriving tomorrow.

In Person Learning
The MArch degree program is offered solely in-person.

The program's role in and relationship to its academic context and university community, including how the program benefits–and benefits from–its institutional setting and how the program as a unit and/or its individual faculty members participate in university-wide initiatives and the university's academic plan. Also describe how the program, as a unit, develops multidisciplinary relationships and leverages unique opportunities in the institution and the community.

Program Response:
Student Coursework
Within the Weitzman School of Design, Weitzman Architecture exists along noted graduate degree programs in Landscape Architecture, Historic Preservation, City and Regional Planning, and Fine Arts, with a possibility of achieving an expedited dual-degree. Weitzman Architecture also offers several post-professional programs, including a Master of Science in Design in Advanced Architectural Design (MSD-AAD), Environmental and Building Design (MSD-EBD), and Robotics and Autonomous Systems (MSD-RAS); as well as the Doctor of Philosophy in Architecture (PhD). Matriculating MArch students have the opportunity to take six elective courses, one of which is a required technology elective, over their three-year course of graduate study and are encouraged to enroll in coursework within the school and beyond.

Interdisciplinary Collaboration
The Weitzman School sponsors or co-sponsors several certificate programs including those in Ecological Planning, Integrated Product Design, and Real Estate Design and Development offered in collaboration with other academic units including the Wharton School and the School of Engineering and Applied Science. The scale and quality of Penn's academic offerings foster a grounded and interdisciplinary approach to a student's individual trajectory. Refer to section 4.2.3 for the range of the school's interdisciplinary offerings.

Faculty Teaching
In the fall 2023 semester, Weitzman Architecture employed over 150 instructors within the department. 16 are standing faculty, with 9 being tenured, 12 are associated faculty, including four Practice Professors or Associate Practice Professors, and eight are full-time lecturers or senior lecturers. In total, full-time appointments make up 36 of our faculty, or 20% of our instructor pool. In addition to teaching in the department, Weitzman Architecture faculty teach in certificate programs co-sponsored by other Weitzman departments, including City Planning, and schools within the university, including the Wharton School.

Information Resources
Penn's world class collections represent the Penn Libraries' vast information resources as well as the preservation of those resources in many forms. Books, journals, and other printed and digital materials join carefully curated artifacts of cultural and human heritage to advance research and scholarship at Penn and beyond. See sections 5.6 and 5.8 for a full account of the school and the university's information resources.

Physical Resources
Meyerson Hall, the primary building of the Weitzman School of Design, sits at the southwest corner of Walnut and 34th Streets, along the diagonal Woodland Walk, which leads directly to College Green, the center of Penn's campus. Meyerson Hall contains major meeting places for all the programs of the Weitzman School as well as the primary studio locations; seminar rooms; fabrication, conservation, and computer and robotics labs; the administrative areas for the School, the Departments of Architecture, City Planning, and Landscape Architecture, and the Historic Preservation Program. See section 5.6 for a full account of the school's physical resources, including Addams Hall, the Fisher Fine Arts Library, and the soon-to-be renovated Stuart Weitzman Hall, and the Polyhedral Structures Lab facilities at the Pennovation center.

The ways in which the program encourages students and faculty to learn both inside and outside the classroom through individual and collective opportunities (e.g., field trips, participation in professional societies and organizations, honor societies, and other program-specific or campus-wide and community-wide activities).

Program Response:
Student Organizations and Resources
The School and Weitzman Architecture host many student-run organizations and extracurricular activities whose scope reaches well beyond the Department.

The Weitzman School Student Council (StuCo) is responsible for championing the interests of all academic disciplines by facilitating connections between students within the school, across the university, and with Philadelphia and the design community at large. In addition to having program-specific events dedicated to social, service, academic, or student group initiatives, StuCo works to shape the Weitzman School into a healthy, integrated collective of artists, designers, planners, and scholars-in-training who share a perspective that looks beyond disciplinary labels in an environment that is stimulating for students and faculty.

Weitzman has a student chapter of the National Organization of Minority Architecture Students (NOMAS). The aim of this chapter is to create a space for minority students which will foster communication and fellowship, a place in which students can advocate for themselves and for change in the profession. Weitzman strives to offer students opportunities to create and maintain relationships within the wider professional community through networking events, portfolio reviews and more. The school has participated in the National Organization of Minority Architects (NOMA) annual EXPO, most recently held in October 2023 in Portland, Oregon.

Inclusion in Design (IiD) is a student organization that aims to address various issues and opportunities that affect marginalized students and students of color at the Weitzman School of Design. Acting as a student collective, IiD strives to foster an environment in which students of color, marginalized identities, and allies can thrive at Weitzman. This includes providing a framework and safe space in which students can voice and engage difficult questions and critical discourse, working with the faculty and administration to support our shared missions of inclusion, and holding our communities accountable for advancing policies and support of diversity, equity, and inclusion.

Other Weitzman student groups include:

PennLooks
HCED Club
Transportation
Black Planners Society
Weitzman Green Action (WGA)
PRESTA (Preservation Student Association)
Weitzman Gardeners
Club Student Planning Association
Urban Tech Club
Penn Food Club

Beyond the School, our students participate in associations and governance organizations including the Graduate and Professional Student Assembly (GAPSA), the Black Graduate and Professional Student Assembly (BGAPSA), the Pan-Asian American Graduate Student Association (PAAGSA), and Lambda Grads, a club which represents all LGBTQ+ graduate and professional students at Penn.

Pressing Matters is the annual publication by the Department of Architecture that showcases the work of our faculty and students from each academic year. Currently in its 11th installment, Pressing Matters XI, published by ORO Editions, showcases the three levels of our MArch Program – 5000, 6000, & 7000 – of select students' work in each of the studio sections in both fall and spring 2021-2022. Included are descriptions of the various courses and electives the department offers. Also highlighted are various events, such as lectures, book launches, and conferences which took place over the two semesters. The work of the MSD-AAD (Advanced Architectural Design), MSD-EBD (Environmental Building Design), MSD-RAS (Robotics and Autonomous Systems), PhD, and IPD (Integrated Product Design) are also included.

PennPraxis is the applied research, engagement, and practice arm at the Weitzman School of Design. PennPraxis collaborates with students, clients, and community organizers to develop tools, strategies, and design interventions that imagine new futures for both urban and rural landscapes, with a goal of sharing power with historically marginalized peoples, creating equity, and generating new resources to address the most pressing social and environmental problems of the 21st century.

See section 5 for a full account of student resources.

Achievement under Dean Steiner's Leadership

Since Weitzman Architecture's last accreditation and under Fritz Steiner's leadership, the School of Design's achievements have been significant. The school was renamed in honor of award-winning designer and Wharton School alumnus Stuart Weitzman, who is recognized for his ongoing philanthropic support of the University and the School of Design and his extensive and ongoing engagement in the our community. Substantial and ongoing increases in financial support for students have been a hallmark of Steiner's first term, including support from Weitzman, the Moelis Scholars Program, the Witte-Sakamoto Family Medal and Prize in City and Regional Planning, the Kanter Tritsch Medal, and Prize in Architecture, and the Julian Abele Fellowship in Architecture. These investments in financial aid have enabled the Weitzman School to attract more top students in all departments and have greatly increased its student body diversity. Under Dean Steiner's leadership, the school has also increased the number of standing faculty and faculty diversity.

The Weitzman School's facilities have also seen considerable improvement under Steiner's leadership with a new Advanced Research & Innovation (ARI) robotics laboratory and new homes for the Center for Architectural Conservation, the Integrated Product Design program, and the future Stuart Weitzman Hall, which includes new studio spaces for the school's programs. Research facilities have also been created and expanded, including ARI, the Polyhedral Structures Lab, the Kleinman Center for Energy Policy, the Center for Safe Mobility, the Center for the Preservation of Civil Rights Sites, and the Ian L. McHarg Center for Urbanism and Ecology.

Achievements Under Chair

During Winka Dubbeldam's 10-year tenure as Chair of the Department of Architecture, the Department has grown in size, reputation, and engagement in sponsored research. Under Professor Dubbeldam's leadership, the Department recruited faculty members on the leading edge of architectural design and research, who worked with the Chair to expand digital fabrication capabilities, fully integrate robotics into the curriculum and strengthen the Department's focus on innovative geometry, construction, and materials. The Department also added a new Master of Science in Design in Robotics and Autonomous Systems, and the total number of students grew by over 40%. Professor Dubbeldam helped bring designers and scholars from around the world to Penn, elevating the lecture series, and then hosting ACADIA – possibly the largest architectural conference outside of AIA -- at a crucial moment of transition in the wake of COVID-19. Thanks to Winka and to the faculty she helped recruit, the Department has substantially increased the number of sponsored research awards and is now known for bridging the gap between theory and practice, a place where both conceptual and technical skills are prized.

Summary Statement of 1 – Context and Mission

This paragraph will be included in the VTR; limit to maximum 250 words.

Program Response:

Weitzman Architecture offers immersion in next-generation design-research facilitated by visionary architects and thinkers from around the world. Our students enjoy a multi-disciplinary approach to the design and interpretation of the built environment, and the breadth and depth of knowledge that only a leading research university can offer. Building on the University of Pennsylvania's principles and resources, the department educates our students for success in their studies and careers in architecture and provides opportunities to faculty and staff for development and career growth. The course of study develops a dedication to the role of the architect in protecting the health, safety, and welfare of the public. Weitzman Architecture is joined by world-class Landscape Architecture, City and Regional Planning, Fine Arts, and Historic Preservation Departments to form the Stuart Weitzman School of Design, inviting interdisciplinary studies, joint degrees, and certificate programs for our students. Located in Philadelphia, the city serves as a laboratory and library for the study of architecture, including access to major construction sites and fabrication shops. Students have access to research laboratories, expanding the possibility of innovation in building construction and performance. The vast, rare, and valuable collections of the Fisher Fine Arts Library and Architectural Archives are rich resources and major assets for the exploration and investigation of History and Theory subjects, not just for students but also for faculty and visiting scholars. Weitzman Architecture equips future professionals with the tools to respond to the most pressing challenges of our time, from climate change to social justice.

2—Shared Values of the Discipline and Profession

The program must report on how it responds to the following values, all of which affect the education and development of architects. The response to each value must also identify how the program will continue to address these values as part of its long-range planning. These values are foundational, not exhaustive.

Design: Architects design better, safer, more equitable, resilient, and sustainable built environments. Design thinking and integrated design solutions are hallmarks of architecture education, the discipline, and the profession.

Program Response:

The Master of Architecture degree program, reviewed by faculty each semester, is comprehensive and rigorous, preparing graduates for the full range of activities in the profession. Anchored by the design studio, thorough training is also provided in history, theory, technology, ecology, society, and professional practice. Studios and courses are supported by a thorough program in visual studies that develops skills in digital representation and new media. At the upper levels of the program students establish individual trajectories by selecting from a range of elective studios and courses with leading figures in design, technology, and theory. Further information can be found in the Weitzman Architecture's response to Program Criteria PC.2 *Design*.

Studio

An intensive sequence of Design Studios constitutes the focus of the Master of Architecture program, emphasizing conceptual development, innovation, and collaboration within a shared environment that encourages experimentation. Students enroll in a total of six design studios, four Core Studios and two Advanced Studios, through their three-year course of study. Students participate in a minimum of two meetings per week with their studio instructor and an additional meeting with a teaching assistant. During studio time students will present progress work to their section critic and contribute to group pin-ups and discussions. Students are expected to be present and contribute during each section meeting so that their projects develop through a continuous and iterative exchange of design development, which includes two-dimensional drawings, three-dimensional renderings and graphics, physical models, and site research. Design studios combine individual and group instruction and include class-wide reviews held at mid-term and at the end of term. Additional studio-related activities include field trips to project sites as well as stakeholder engagement.

Core Curriculum

The first and second years of study provide a core of architectural knowledge with a sequence of courses in History and Theory (3 courses), Construction (2 courses), Structures (2 courses), Environmental Systems (2 courses), and Professional Practice (2 courses). Building on studies of form and assembly in Design Studio I, site and ecology in Design Studio II, and plan, spatial organization, and access in Design Studio III, the second year culminates with Design Studio IV, which provides students the opportunity to incorporate their studies to date in a building design project that emphasizes *Design Synthesis* and *Building Integration,* demonstrating knowledge of systems and construction detailing. In response to prior NAAB commentary, History and Theory III (ARCH 6110) has been newly themed *Contemporary Architectural Theories* and seeks to build student literacy including in areas of vernacular, indigenous and non-Western architecture, and global architectural discourse in correlation with design culture.

Advanced Studio

The final year culminates in advanced design studios V and VI (ARCH 7010 and 7040) that include research directed by leading designers as well as the option of an independent thesis. All advanced studios feature a week of travel, often to international destinations,

contributing to the global and cultural exchange missions of the architecture program. Summer programs abroad and studios based in other countries provide opportunities for international studies. These studios often partner with outside institutions to advance the field through collaborative innovation and experimental research directed by distinguished faculty. The achievements of these partnerships and advanced inquiries into design have been widely published and exhibited. Some such pioneering work, partnerships, and research achievements that have resulted include:

The GAD Foundation Istanbul has been sponsoring the design research studios of Associate Professor Ferda Kolatan since 2018. GAD's mission is to "positively affect practice and theory in architecture and urbanism with a focus on education, society, and their intersection with architecture and urbanism." One subject of these research studios deals with new forms of architecture that emerge from the accidental mergers and hybridizations produced by cosmopolitan megacities (such as Istanbul). Another research subject deals with new types of architecture that use rock as their primary building material (in Cappadocia). Both research subjects aim to provide a more resourceful approach to design while advocating for pluralist cultural expressions and the inclusion of historical buildings into new architecture. Ferda Kolatan's design studio "Real Fictions Cairo" also received the inaugural AIA ARCHITECT Studio Prize in 2017.

Mette Ramsgaard Thomsen is the Cret Chair Professor of Practice in the Department of Architecture at Weitzman. In her own work and through her advanced studios, Thomsen examines the intersections between architecture and advanced computational design processes examining the profound changes that digital technologies instigate in the way architecture is thought, designed and built. In 2005, she founded the Centre for IT and Architecture research group (CITA) at the Royal Academy of Fine Arts, School of Architecture, Design and Conservation, where she has piloted a special research focus on the new digital-material relations that digital technologies bring forth. Her ARCH 7040 studio "Towards a Bio-Based Architecture of Duration" asks how architecture can engage the limited timespans of bio-based materials and how architecture can be understood outside the ideal of permanence and instead embody differentiated timeframes.

Under the direction of Associate Professor Simon Kim, Weitzman School of Design has participated in an ongoing collaboration with Seoul National University (SNU) since 2014. These initiatives have been supported by Heerim Architects and Planners, a global leader in architecture and construction whose CEO, Jeong Young-Kyoon, is alumnus of UPenn. Invited as one of the international studio participants for the Seoul Biennale of Architecture and Urbanism in 2017, Simon Kim's ARCH 7010 studio was assigned a complex site along the Cheonggyecheon Waterway from the Seunsangga megastructure to the US Military base at Dongdaemun. Kim and his students were asked to analyze the project in terms of ecology and sustainability, as well as expand upon its function of urban renewal. Their resulting designs were on view as part of the Seoul Biennale International Studios (SBIS), a research-based exhibition curated by John Hong, professor at SNU.

During the fifth term of the Master of Architecture Program, up to fifteen students a year may enroll for a semester abroad program in London, England. This is coordinated by Professor Homa Farjadi and is housed at the Architectural Association (AA), located on Bedford Square in the heart of Bloomsbury. Students enroll in a special design studio, ARCH 702, taught by Prof. Farjadi, and in two elective courses offered by the faculty of the AA.

Environmental Stewardship and Professional Responsibility: Architects are responsible for the impact of their work on the natural world and on public health, safety, and welfare. As professionals and designers of the built environment, we embrace these responsibilities and act ethically to accomplish them.

Program Response:

Curriculum

The curriculum at Weitzman Architecture has evolved to forefront an ethical response to questions of social quality and environmental sustainability. These goals align with Penn's greater Climate and Sustainability Action Plan (CSAP). In particular, the first-year studios work on sites in Philadelphia, seeking to acknowledge the city's historic fabric while embracing sustainable design. Studios engage the larger urban ecosystem, and through stakeholder and civic engagement create meaningful change for a sustainable future. Further information can be found in the Weitzman Architecture's response to Program Criteria PC.3 *Ecological Knowledge and Responsibility*.

Design for the Public

Environmental and urban analysis, siting and programming of a medium-scale building, and cultural dimensions of public space, are stressed in Design Studio II (ARCH 5020). The studio proposes the design of a 30,000 square foot urban building with a 10,000 square foot exterior element, working on a particular urban site assigned to the students is thoroughly analyzed. Students work in teams and present site criteria: Historical, Environmental and Ecological, Socio-economic and Political, Morphological (Built Environment), Infrastructural, and Civic. After completing a research phase, students engage questions of site in its multiple local and expanded dimensions and position a building to answer many of the criteria and research examined.

Design Studio III (ARCH 6010), Weitzman Architecture's Urban Housing Studio proposes the design of a 50,000 square foot, urban sited building that positions a new housing project with an existing structure, which is adaptively reused. Students engage architecture in its role as a cultural agent and examine the way buildings establish and organize dynamic relationships between site, program and building materials. Urban access, relationship to siting, mass-transit, and the larger city are considered.

Technology and Practice

In the core and particularly in the first year, students enroll in a two-course sequence of both Construction (ARCH 5310 and 5320) and Structures (ARCH 5350 and 5360). These technology sequences include concepts of load bearing and frame construction, sustainable and emerging construction practices, and integrated building practices. The Environmental Systems sequence (ARCH 6330 and 6340), a building delivery research course "D^3: Details, Data and Delivery" (ARCH 6310), and emerging digital fabrication course "Material Formations" (ARCH 6360), develop fundamental knowledge of the principles of building science including the physical laws of energy, the laws of thermodynamics and the principles of heat transfer, particularly as they relate to human comfort. For instance, Environmental Systems I examines ecological systems, including the hydrological cycle and the carbon cycle, and develops an understanding of how building systems interact with and impact these cycles. The D^3 course invites specialists in the delivery of biogenic material construction to lecture in class. These courses teach the impact of health, safety, and welfare in design studies with instruction in code, regulations and industry standards.

History and Theory

History and Theory III (ARCH 6110) is themed *Contemporary Architectural Theories*. Taught by new faculty Daniela Fabricius, Vanessa Grossman, and Fernando Lara, the goal is to build literacy in contemporary architectural discourse in correlation with design culture. Students gain awareness of positions in the field of contemporary architectural theory, especially in terms of its societal and scientific relevance. Lectures and discussions look at the aesthetic, political, and ethical implications of design, and consider the global context of architecture considering climate change and emerging building and design technologies.

Equity, Diversity, and Inclusion: Architects commit to equity and inclusion in the environments we design, the policies we adopt, the words we speak, the actions we take, and the respectful learning, teaching, and working environments we create. Architects seek fairness, diversity, and social justice in the profession and in society and support a range of pathways for students seeking access to an architecture education.

Program Response:
The department of architecture and the broader Stuart Weitzman School of Design at the University of Pennsylvania has a longstanding commitment to cultivating an environment that celebrates and promotes diversity, champions social equity, and is inclusive of all members of our community. We strive to promote a greater sense of *justice* by planning to make structural changes that ensure everyone in our community has access to equal opportunities and that everyone in our community knows that they *belong*.

Penn launched in 2020 the Weitzman School Justice and Belonging (JxB) Initiative, inviting students, faculty, and staff from all over the world to become more aware of their power as learners, educators, and facilitators at an elite university to make design justice a central motivation for the Weitzman community as we navigate experiences with and systems of oppression. We have organized these ambitious actions in these areas: 1) Strengthening the diversity of the curriculum. 2) Increasing the diversity of faculty, staff, and students. 3) Creating a more inclusive community via training and programming. 4) increasing financial aid to promote greater economic diversity.

Curriculum
Beginning in the 2020-2021 academic year a central goal of the second-year design studios (ARCH 6010 and 6020) is the design of solutions to address equity, inclusion, and justice, specifically within the discipline of architectural design. In the Urban Housing Design Studio (ARCH 6010) each studio section includes the design of Public Common Space, which is studied in a week-long exercise that is coordinated with plan, section, and façade development. Public Commons is a term used for shared, equitable access to resources such as air, oceans, and wildlife as well as to social infrastructures such as libraries, civic programs, and open spaces that relate directly to the impact and success of dense housing in the city. Public Common Space for the architecture studios is launched as a catalyst to study the confluences of equity and inclusion through thoughtful inquiry. To allow points of view beyond the faculty, stakeholders from outside of the department and school are regularly engaged. An assessment goal of this outreach is ensuring each studio has access to outside stakeholders. The number of Urban Housing studios engaging dedicated stakeholders in Fall 2023 is 60%, with the goal of all studios having such outreach by fall 2025. Further information can be found in the Weitzman Architecture's response to Program Criteria PC.8 *Social Equity and Inclusion*.

Diversity in Faculty and Student Body
The composition of Weitzman Architecture's faculty encompasses a variety of professional paths and personal life experiences, and its student body encompasses a diversity of backgrounds, interests, and identities. Since 2021, the Weitzman School's assertive outreach efforts contributed to an increase in the number and percentage of BIPOC faculty, staff, and students joining the Weitzman School community. From Fiscal Year (FY) 2021 to FY 2022, the percentage of standing faculty from minority groups increased from 13% to 17%, and the percentage of standing faculty from underrepresented minority groups increased from 9% to 11%. In addition, Weitzman joined a consortium of nearly two dozen other design schools in the *Deans' Equity and Inclusion Initiative*. This ongoing undertaking is devoted to nurturing a diverse population of emerging scholars by providing mentorship to Black, Indigenous, and People of Color (BIPOC) assistant professors and post-docs and includes the nearly two dozen major design schools in the U.S. Weitzman enrolled a total of 705 students in the fall 2023 semester, including 660 master's students, 44 doctoral students and 1 standalone

certificate student. Approximately 41.2% of US students are from minority groups, and 27.1% are from underrepresented minority groups (Black, Hispanic, or Native American students).

Education and Culture
In September of 2020, Dean Steiner charged each of the School's departments and research centers with developing a comprehensive Diversity, Equity, and Inclusion (DEI) Plan. In October of 2020, Weitzman launched the Center for the Preservation of Civil Rights Sites to advance the understanding and sustainable conservation of heritage sites relating to African American struggles for equality. In November of that year, the School established the Julian Abele Fellowship in Architecture, to be given annually to a graduate architecture student or students. In the spring of 2021, Weitzman established the BIPOC Alumni Career Conversation Series to support current students as well as alumni. But more work is to be done.

Justice Alliance for Design Education in Philadelphia (JADE-PHL) is a consortium of greater Philadelphia architecture schools (Penn, Drexel, Jefferson, Temple, the Community College of Philadelphia, and Penn State which has a studio in the city), the local American Institute of Architects chapter, and local design firms, convened by the Philadelphia Center for Architecture and Design. The Dean and Weitzman faculty from the Department of Architecture are active participants in this group, which is working to develop new initiatives to attract and retain more students of color to the architecture field, advocate for the needs of underrepresented individuals in the profession and provide new educational opportunities to consider the impact of design work on communities of color. In May 2022 and 2023, JADE sponsored a day-long symposium for representatives from local architecture schools to assess the state of design education and consider the following questions: (1) are design studios reinforcing race, gender, and class differences? (2) Are professors prepared to handle difficult and/or uncomfortable discussions and experiences that may arise from community interactions? (3) What training and experience do professors have that might help or hurt the situation?

Income Diversity and Financial Aid
In our efforts to create a more just and equitable community, the Weitzman School of Design recognizes the need to address the financial challenges facing our students and implement new initiatives and policies to help prevent economic exclusion. The Weitzman School of Design awards scholarships ranging from $12,000 to full tuition to Weitzman Scholars – students whose backgrounds and experiences offer varying perspectives on living and learning in a multicultural world. Weitzman Scholars receiving full tuition scholarships also receive a $5,000 stipend to assist with living expenses. These scholarships and stipends are renewable for a student's entire career, provided that students maintain full-time status and good academic standing. Scholarships for graduate students are based on merit and are awarded by the Chair of the Department.

Weitzman also awards the Julian Abele Fellowship in Architecture, which was established in Fiscal Year 2021 and is given annually to a graduate architecture student or students once the fund is fully endowed. The Fellowship is named for the first Black architect to graduate from Penn in 1902.

Gender and Demographic Balance
Student and Faculty Demographics information appears in Section 5 in our Annual Report (Master of Architecture) that was submitted on Dec. 15, 2023. Refer to the document for our most recent data regarding gender and ethnic demographics.

Knowledge and Innovation: 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.

Program Response:
Weitzman Architecture equips future professionals with the tools to respond to the most pressing challenges of our time, including climate change to social justice, through innovation and design-research. Innovation is supported by rigorous research within the department's Advanced Research & Innovation Lab (ARI). The ARI brings together the combined expertise of Weitzman School faculty members with state-of-the art and robotic fabrication, measurement, and modeling technologies and increasing autonomous and artificial intelligence systems.

Innovation particularly in the realm of fabrication in architecture and design has taken a dramatic shift in recent years due to the increasing accessibility of industrial robotic arms, and this access has implication for both the practice of architecture and how others build our work. When deployed in creative industries such as architecture, they represent an entirely novel platform for multi-task and multi-axis fabrication. Unlike computer-aided manufacturing tools that are designed to perform a single operation, robotic arms provide up to seven degrees of multi-axis freedom and can be equipped with a limitless array of specialized tools. In addition to augmenting traditional subtractive techniques, including laser cutting and milling, robotic arms carry out contemporary automated modes of additive and formative manufacturing including, but not limited to, bending, folding, 3D printing and deposition, composite material filament winding, 3D scanning, real-time sensing, and much more. Access through research initiatives to robotic arm technology enables designers to develop unique routines and customize material manipulation and transformation through an endless range of tools and end effectors.

Curriculum
The Master of Architecture program integrates research being conducted by our faculty in various labs with our course of graduate study (see section 5.6). Faculty who conduct sponsored research teach at all levels of the curriculum. In addition to our studios, which culminate in the Advanced Design-Research Studio (ARCH 7040), courses in Visual Studies (ARCH 5210, 5202, and 6210), Construction and Structures (ARCH 5310, 5302, 5350, and 5360), Professional Practice (ARCH 6710 and 7710), History and Theory (ARCH 5110, 5120, and 6110), and Environmental Systems (ARCH 6330 and 6340) provide a broad and comprehensive approach to the practice of architecture. D^3 (ARCH 3610) and Material Formations (ARCH 6360) introduce students to immersive technologies of fabrication, including robotics and biogenic constructions. Further information about innovation in the Weitzman Architecture curriculum is found in PC.5.

Advanced Technology
Advanced modeling, fabrication, simulation, and information systems are an integral part of the curriculum. All studios continually offer advanced technologies to students for the development and interrogation of their design work at Penn. Students have access to a variety of labs and equipment stations, along with arrays of 3D printers adjacent to studios. Additionally, Venture Labs, a new initiative connected to Penn's Integrated Product Delivery (IPD) program, is a collection of workspaces and labs that house digital and analog fabrication technologies available to the Penn community. Architecture students take advantage of the 3D printing, milling, and robotic fabrication opportunities offered by the University, and are introduced to these facilities in "Digibalst" software training sessions during their orientation weeks to the program.

Advanced Academic Study
Weitzman Architecture offers a number of advanced study areas leading to a Master of Science in Design. These programs are taught by architecture faculty and include the MSD in

Environmental Building Design (MSD-EBD), the MSD in Robotics and Autonomous Systems (MSD-RAS), and the MSD in Advanced Architectural Design (MSD-AAD). Students enrolled in advanced programs integrate with Weitzman's Master of Architecture students in various ways, including enrolling in technology-related elective seminars and participating in sponsored research.

The Department's Ph.D. Program in Architecture is committed to the productive creation of critical knowledge in Architecture that brings value to the built environment. Penn's Ph.D. Program in Architecture, created in 1964, is the oldest in the country and is widely regarded as preeminent in the fields of *theory and history*, and most recently, *technology*. Its goal is to produce graduates critically engaged in architecture as it relates to professional, technological, historical, social, ecological, material, and political developments in the field. Students who focus their doctorate on architectural history and theory explore subjects aligned with contemporary political theory, migration studies, post-colonial theory, gender and queer studies, race and equity, literary theory, ancient architecture, urban theory, landscape architecture, historic preservation, material studies, building theories, environmental theory, and the history of science and technology. Students whose efforts are centered on technology investigate structural and computational form-finding, digital fabrication, environmental design, thermal architecture, and biomaterials, often working alongside Weitzman's labs and centers, including the Center for Environmental Building Design, the Polyhedral Structures Lab, the Thermal Architecture Lab, or the Dumo Lab. The connection of these programs to our Master of Architecture is elaborated in PC.3 and 4.

Undergraduate Major/Minor

Faculty members participate in the education of Penn undergraduates, with the involvement of Graduate Teaching Assistants from the department. Undergraduate education in architecture at the University of Pennsylvania is offered within the College of Arts & Sciences with courses taught by faculty in the School of Arts & Sciences and the Weitzman School of Design. The degree earned is a Bachelor of Arts from the School of Arts & Sciences, a nonprofessional degree. Students may also pursue a minor in architecture as well. Alumni of the program are prepared for graduate study in architecture, as well as advanced study in a variety of fields, including art, art history, urban planning, environmental studies, social studies and public affairs.

Research Initiatives

Research initiatives at Penn are broad, and are focused in Weitzman's various labs and centers. These include:

Center for Environmental Building + Design (CEBD) (Director: William Braham)
Polyhedral Structures Laboratory (PSL) (Director: Masoud Akbarzadeh)
Thermal Architecture Lab (Director: Dorit Aviv)
DumoLab Research (DLR) (Director: Laia Mogas-Soldevila)
Autonomous Manufacturing Lab (AML) (Director: Robert Stuart-Smith)

The labs and our standing faculty that lead them currently receive funding from a variety of sources including the Johnson & Johnson Foundation, US Department of Energy, and the National Science Foundation (NSF). Research being conducted in these labs contributes directly to student learning and engagement, both in the classroom and these labs. For a full description of all of Weitzman's research labs and centers, see section 5.6.

Extracurricular Programs and Publications

The production of knowledge at Weitzman Architecture is disseminated in various ways outside of conventional educational channels, including public lectures and publications. Each semester, the department and larger school host an Evening Lecture Series bringing together architects, other built environment professionals, artists, historians, and curators to

discuss the ideas animating their work and the forces shaping their professions. Weitzman is a Continuing Education Provider registered with the American Institute of Architects (AIA). The lecture series is increasingly attended by alumni and local professionals and is an important community resource. A sample of faculty authored books since the last accreditation period include Annette Fierro's *Architectures Of The Technopolis* (2023), Richard Garber's *Building Futures* (2023), and Andrew Saunders' *Baroque Topologies* (2018), and Franca Trubiano's *Building Theories: Architecture as the Art of Building* (2022). See section 5.8 for a full account of lectures and events from the past academic cycle.

Long Range Planning for Innovation

Weitzman Architecture is committed to increasing opportunities for innovation within our community, and particularly for our faculty and students fueled by the input of outstanding faculty. Since 2021, a number of new tenure and tenure track searches have been completed within the department. Hires include three new faculty in History and Theory, Professor Fernando Lara, and Assistant Professors Daniela Fabricius and Vanessa Grossman, and following a comprehensive global search, Rossana Hu joined the department as Chair in January 2024.

Leadership, Collaboration, and Community Engagement: Architects practice design as a collaborative, inclusive, creative, and empathetic enterprise with other disciplines, the communities we serve, and the clients for whom we work.

Program Response:

Architectural practice is increasingly complex, with a myriad of environmental, socio-cultural, and technological inputs each contributing to successful design thinking and execution. Weitzman Architecture understands community engagement is sometimes episodic, and through our curriculum cultivates a trajectory of community involvement and diverse representation in decision-making. Our students learn such actions are critical to a project's success and create an overall more inclusive social infrastructure.

Cultivating Collaboration and Leadership Among Students

Beginning in the Studios I and II, community outreach and stakeholder input are stressed. In the first year, students are asked to design an extension to a small, local cultural institution, where students not only visit and analyze site and context but engage specific stakeholders such as museum curators and community stakeholders. In Studios III and IV this engagement continues with a two-semester public-commons theme that undergirds the studio programs and mates either a building type such as urban housing, or a design goal such as systems integration, with a social component and investigation of *Public Commons*.

In addition to community outreach, ideas of collaboration – in particular with others outside of the university – are introduced with students interacting with experts or advocates who provide input to their design projects. A portion of reviews for the first- and second-year studios are held communally, encouraging broad discussion between students and faculty, allowing them to understand common design goals. Studio section instructors collaborate with the coordinator in developing a studio brief, organizing a semester schedule, and grading outcomes after the midterm and final reviews.

Ideas of leadership are equally encouraged in both the studio and seminar setting, with students given ample autonomy to assert agency. Beginning in the first studio, students work individually and collaborate in groups on their design work. Faculty mentoring of students both formally within the classroom and informally beyond is central to the tenant of education at Weitzman Architecture, and instills in our students ideas of creativity, challenging of norms, and risk-taking. This idea of collaboration is carried into the advanced third-year design studios, which each include funded travel to visit non-local and international sites and interaction with stakeholders. In each instance, collaboration is structured though a lens of

practice, where students learn that architects generally work in a collective and democratic environment, with multiple participants having specific scope in the success of a design project.

Collaboration with Design Professionals and Consultants

Beginning in the first year, students work collaboratively on coursework, with each group sharing responsibility for specific criteria relating to course learning objectives and student and program criteria. In Design Studio II (ARCH 5020), students often work in collaboration with neighborhood community organization, often through the University of Pennsylvania's Netter Center and with Penn Praxis. These entities provide guest lectures and are invited to join major juries through the process. In ARCH 6310 D^3 Details, Data and Delivery, consultants are paid to participate in course lectures, with recent lectures by SHoP, Werner Herzog, and faculty from the Royal Danish Academy. In the design studio, student teams regularly interact with design professionals and consultants, either as external reviewers of their work, or through work sessions with consultants to discuss a particular aspect of their work, including the integration of structural and mechanical systems. Each section of ARCH 6020 Studio IV has three (3) consultants engaged by the instructor. These practicing professionals include a structural engineer, façade or material expert, and civil engineer or mechanical, electrical, and plumbing (MEP) consultant. At times, studios will include more specialized consultants such as an acoustic engineer or museum curator.

Community Engagement

In addition to the studios, seminars, related coursework, and extra-curricular activities further emphasize the role of Weitzman Architecture in the community. This work occurs in Philadelphia and beyond. Some recent efforts include:

Studio+ This past spring, Weitzman offered its second Studio+, a school-wide interdisciplinary design /build studio focused on community-engaged design, planning, art and preservation in Philadelphia – a permanent Weitzman School social justice initiative coordinated by PennPraxis. The aims of Studio + are to encourage long-term dialogue between communities of color and the University to shape new agendas and partnerships, and skills development for Weitzman students. The Spring 2023 Studio+ studio, led by two landscape architecture alumni, focused on working with community members to conceptualize and develop the Lex Street Community Garden, located near the intersection of Lancaster Avenue and 44th Street. The Lex Street Garden was designed to embody the New Freedom District, an initiative focused on illuminating the Civil Rights heritage of the Lancaster Avenue corridor that was named in part to commemorate the two-day "Freedom Now" rally that King held near 40th and Lancaster streets in August of 1965. The site repurposes and activates formerly vacant lots with new landscaping, newly built furniture, and a student-built pergola.

Design to Thrive PennPraxis received $7.5M from Lori Kanter Tritsch (MArch'85) and William P. Lauder (W'83) to continue Design to Thrive, a summer youth development initiative that has served school-aged youth of color in New York City and Philadelphia in the summers since 2020. The Design to Thrive studios are a major learning investment based on the high engagement / deep experience model of design education at the Weitzman School of Design. The studios are taught by Weitzman graduate students, seniors in the College of Arts and Sciences, and young alumni in Architecture, Landscape Architecture, and Fine Arts, supported by faculty and PennPraxis. The aim of Design to Thrive is to address the opportunity gap for low-income youth of color, to advance skills development and awareness of the relevance of design, planning, art and preservation professions, and to increase diversity in design schools and the profession over the long run.

Rising Scholar Success Academy Weitzman faculty participate in the Penn Rising Scholar Success Academy (Penn-RSSA) by offering a one-week introduction to the design

professions as part of a free, virtual, six-week summer program designed for rising high school seniors in Philadelphia School District or Archdiocese schools. Faculty that participate are Andrew Saunders and Rashida Ng.

Public Programs

Weitzman lectures and symposia are attended by alumni and practitioners from the greater Philadelphia region, New York City, and beyond and provides continuing education learning units to participants. The lecture series is increasingly attended by alumni and local professionals and is an important community resource. Recent guests of the department's lecture series have included Bernard Tschumi, Steven Holl, and Jesse Reiser and Nanako Umemoto. In the fall semester 2023, guests included Eric Owen Moss, Marlon Blackwell, and Daliana Suryawinata and Florian Heinzelmann.

Student Empowerment

Weitzman hosts a culture of student activities and groups, accentuated by student-run organizations and publications.

The Weitzman School Student Council (StuCo) is responsible for championing the interests of all academic disciplines by facilitating connections between students within the school, across the university, and with Philadelphia and the design community at large. Rather than having program-specific events dedicated to social, service, academic, or student group initiatives, the Student Council works to shape Weitzman School into a healthy, integrated collective of artists, architects, planners, and scholars-in-training who share a perspective that looks beyond disciplinary labels in an environment that is stimulating for students and faculty. StuCo organizes the school's Friday afternoon Happy Hours, a tradition since 1967. StuCo also cooperates with our Thanksgiving and Lunar New Year events and leads the annual Beaux Arts Ball.

Incorporated under StuCo in fall 2023, The Wellness Working Group (WWG) is a student-run, centralized channel through which Weitzman architecture students can collect and discuss concerns about their mental and physical wellness, as well as brainstorm pathways to address these concerns. The group aims to bring collective student concerns and suggested pathways for improved wellness before the department chair, standing faculty, and affiliated faculty. Members work with the department chair to determine the best type of forum for each topic and facilitate strong department-student communication and collaboration. Following its initial formation, WWG represented the wellness concerns and suggestions of a portion of architecture students with the eventual goal of representing the wellness concerns and suggestions of all architecture students from each level of the program. Their input will be sourced from student surveys, focus groups, and one-on-one discussions.

In November 2023, the Wellness Working Group organized and hosted a Town Hall event for all students in programs within the Department of Architecture with three goals: to provide a venue for the collection of large quantities of data concerning student wellbeing, to empower and validate students through community and a shared recognition of collective concerns, and to open pathways of communication on issues of student wellness with faculty leadership. The Town Hall, which was attended by over 100 architecture students, was divided into two stages. The first combined anonymous polling with live results and small group discussions gathering data on general, academic, workload, and resource access and wellbeing, assuring students of the validity of their concerns. In the second, faculty leadership responded to the survey results through a moderated discussion. Results were compiled and presented to faculty and shared with the entire Weitzman body in January 2024. Discussions are currently underway with faculty leadership on several proposed improvements derived from this process.

The department's NCARB Licensing Advisor serves as an information resource for licensure candidates and architects on the path to licensure, providing guidance within the context of state regulatory requirements, reciprocity, and NCARB certification. The Licensing Advisor participates in the Architect Licensing Advisors Community's annual meeting and provides feedback to the faculty and student body. Each year, the department hosts a school-wide lunch lecture in Meyerson Hall that is coordinated with the required Construction I (ARCH 5310) and Professional Practice II (ARCH 7710) lecture courses.

Lifelong Learning: Architects value educational breadth and depth, including a thorough understanding of the discipline's body of knowledge, histories and theories, and architecture's role in cultural, social, environmental, economic, and built contexts. The practice of architecture demands lifelong learning, which is a shared responsibility between academic and practice settings.

Program Response:
In addition to our curricular initiatives, other aspects of Weitzman culture further our dedication to lifelong learning, and architecture, as a way of engaging the world. The Weitzman School of Design educates lifelong learners, and Weitzman Career Resources (WCR) provides prospects for refreshing technical skills, invigorating creativity, overcoming the isolation of solo practice, or finding career opportunities. Career Resources is the link between Penn's alumni and our current students, facilitates summer and between-semester internships as well as placement opportunities post-graduation.

The Master of Architecture and Honors Master's Thesis, held over a full academic year, empowers students to develop their own research topics, followed by a design project in the spring. In doing so, students develop a set of interests which often lead to multi-year or lifelong pursuit of these interests, either in academia, professional architectural or non-architectural endeavors.

<u>Alumni</u>
In the Fall 2023, the department conducted a survey of alumni extending from graduates from 1950 to the present. The department received 433 responses, with 339 respondents having graduated over 10 years ago and 94 respondents having graduated within 10 years. The survey is instrumental in providing the program with valuable information to influence changes and to confirm decisions for the department, including lifelong learning initiatives within the program. The survey provides information regarding the career paths and the opportunities that a Penn MArch degree offered, along with the program's effectiveness in assisting alumni throughout their careers. The survey separately captured responses from alumni with less than 10 years since graduating and those beyond 10 years. The following results were noted:

- Alumni indicate that Penn enjoys a tremendous reputation in the world of architecture.
- The survey indicated significant positive regard for Penn's Weitzman MArch program and the education that the alumni received.
- Over 90% of all those respondents have careers in architecture practice or an allied field with 10% identifying as academics.
- Over 97% of all respondents noted that they were employed or retired.
- Alumni with less than 10 years since graduation noted the advantage of digital skills, especially Revit, acquired at Penn were an advantage in finding employment.
- Alumni with less than 10 years noted that the program was effective in preparing for careers in design tracks.
- Alumni with less than 10 years noted that the studies would have benefited from additional studies in the business aspects and technical documentation skills in their studies.
- Responses from alumni with more than 10 years since graduation showed that 65% have obtained licensure in the United States and 8% are pursuing licensure.

- Responses from alumni with less than 10 years since graduation showed that 35% have obtained licensure in the United States and 50% are pursuing licensure.
- Alumni with more than 10 years since graduation responded that they are principals or have key roles in their firms or leadership positions in their organizations with 31% in senior level positions, 33% principals in their firms, and 28% business owner.
- The survey indicated a concern regarding the cost of education and the impact of their financial situation after graduation.

The Weitzman Executive Education program offers curated non-credit courses and certificates to support creative professionals committed to creating a more just and sustainable future. Weitzman Executive Education empowers learners to acquire new knowledge and skills, grow larger and more influential networks, and become more powerful change makers within their organizations and communities. Highly acclaimed Penn faculty and industry thought leaders conduct courses on topics ranging in scale from the global energy transition to resilient cities to sustainable spaces and places, innovative products, and art that inspires change. The courses and programs are designed to be achievable, affordable, and accessible for working professionals of diverse backgrounds and different levels of responsibility. The Weitzman School offers flexible online programs in Executive Programs in Design Leadership (XDL) and Design for Sustainability (XDS) and co-sponsors a program in Social Innovation Design in partnership with Penn's Center for Social Impact Strategy (CSIS) and School of Social Policy and Practice.

Each semester, the department and larger school host an Evening Lecture Series bringing together architects, built environment professionals, artists, historians, and curators to discuss the ideas animating their work and the forces shaping their fields. Weitzman is a Continuing Education Provider registered with the American Institute of Architects (AIA). The lecture series and Weitzman symposia are open to the public and increasingly attended by alumni and local professionals, serving as an important community resource (see section 5.8).

3—Program and Student Criteria

These criteria seek to evaluate the outcomes of architecture programs and student work within their unique institutional, regional, national, international, and professional contexts, while encouraging innovative approaches to architecture education and professional preparation.

		Year 1										Year 2										Year 3										Non-Curricular Activity									
		Fall					Spring					Fall					Spring					Fall					Spring														
	Preparatory Education	Design Studio I	History and Theory I	Visual Studies I	Construction I	Structures I	Design Studio II	History and Theory II	Visual Studies II	Construction II	Structures II	Design Studio III	History and Theory III	Visual Studies III	D3 Details, Data, Delivery	Environmental Systems I	Design Studio IV	Environmental Systems II	Material Formations	Professional Practice I	Elective I	Design Studio V	Professional Practice II	Elective II	Elective III	Design Research Studio	Tech Designated Elective	Elective IV	Elective V	Activity Name	Activity Name	Activity Name	Activity Name	Activity Name	Activity Name	Activity Name	Activity Name	Activity Name	Activity Name
		5010	5110	5210	5310	5350	5020	5120	5220	5320	5360	6010	6110	6210	6310	6330	6020	6340	6360	6710		7010	7710			7040	7320														
Shared Values																																									
Design		x					x					x					x					x					x													
Env. Stewardship & Professional Respon.																				x			x																
Equity, Diversity & Inclusion			x					x				x																												
Knowledge & Innovation			x		x	x		x		x	x		x		x	x		x	x								x												
Leadership, Collab. & Community Engmt.							x													x		x	x																
Lifelong Learning		x					x					x					x					x					x													
Program Criteria																																									
PC.1 Career Paths																				x			x																
PC.2 Design		x		x			x		x			x		x			x					x				x													
PC.3 Ecological Know. & Respon.															x	x		x																					
PC.4 History & Theory			x					x					x																											
PC.5 Research & Innovation															x				x							x													
PC.6 Leadership & Collaboration		x										x					x					x				x													
PC.7 Learning & Teaching Culture		x					x					x					x					x				x													
PC.8 Social Equity & Inclusion			x					x				x	x				x																						
Student Criteria																																									
SC.1 HSW in the Built Environ.					x	x				x	x							x																					
SC.2 Professional Practice																				x			x																
SC.3 Regulatory Context										x	x				x		x																						
SC.4 Technical Knowledge				x	x	x			x	x	x			x	x	x		x	x								x												
SC.5 Design Synthesis							x					x					x			x			x																
SC.6 Building Integration										x							x																						

Weitzman Architecture PC/SC Matrix

3.1 Program Criteria (PC)

A program must demonstrate how its curriculum, structure, and other experiences address the following criteria.

PC.1 Career Paths—How the program ensures that students understand the paths to becoming licensed as an architect in the United States and the range of available career opportunities that utilize the discipline's skills and knowledge.

Program Response:

As a professional design school within the University of Pennsylvania, Weitzman Architecture strives to instill in our students a commitment of high standards to architectural design and the profession of architecture.

Courses exploring architecture's rapidly evolving professional and disciplinary environment include required lectures in professional practice and project management (ARCH 6710 and 7710), as well as electives that are components of the school's certificate program in Real Estate Development, co-sponsored by the Department of City Planning and Wharton School (ARCH 7610 and 7620).

ARCH 6710
Professional Practice I: The Project
Philip Ryan

ARCH 6710 plays a pivotal role in integrating the student's design, history and theory, and technical expertise into the broader framework of the regulatory, business, and cultural realms they will encounter in their professional journey. The course provides an overview of professional practice and the discipline of architecture. Lectures delve deep into the mechanisms for articulating a design vision visually and verbally and the systems employed to ensure successful implementation of that vision. The lectures draw connections between the student's studio design knowledge to date and the instructor's experience in practice including local building examples and current events.

ARCH 7710
Professional Practice II: The Practice
Philip Ryan
In ARCH7710, students explore the intricacies of running a successful architectural practice within the contemporary construction, liability, and regulatory environment. Building upon the knowledge gained in ARCH6710, this course examines how an architectural office can be strategically designed to facilitate seamless execution of design and construction processes. Throughout the course, a wide range of essential topics is covered. These include issues related to finance, liability, ethics, and the regulatory codes that significantly impact the design and construction industry. By addressing these critical aspects, students gain valuable insights into the operational aspects of an architectural practice, ensuring they are well-prepared to navigate the complexities of the professional sphere. The lectures in ARCH7710 effectively bridge the gap between the students' studio design knowledge and real-world practice.

Elective Courses

ARCH 7610
Introduction to Real Estate Development for Architects
Richard Garber, AIA
The course introduces students to the participants and components to the development process, as well as specific development strategies and design tools for engaging them.

ARCH 7620
Design and Development
Alan Razak
This newly reconstituted course will introduce designers and planners to practical methods of design and development for major real estate product types.

ARCH 7650
Project Management
Charles Capaldi, AIA
The course is an introduction to construction management, project management and various construction project delivery systems. In the study of construction and project delivery systems, students examine the players, relationships and the advantages and disadvantages of different contractual and practical relationships.

Non-Curricular Activities
Career Services and Licensing Advisor
Weitzman Career Resources is the link between Penn's alumni, professional practices, and our current students, and facilitates summer and between-semester internships as well as

placement opportunities post-graduation. Kali E. Meeks, Ed.D. is the Director of Professional Development and Leadership at Weitzman. Ms. Meeks' office plans a series of career fairs hosted both at Penn and online during the academic year.

The department's NCARB Licensing Advisor is Philip Ryan, RA. The licensing advisor serves as a liaison between the department and NCARB, allowing an "open and free dialog" so that students understand licensure and intern development requirements, as well as alternative career paths. The department holds an annual school-wide lunch lecture in November to discuss various paths to licensure.

Lectures, Symposia, and Outside Perspectives
Each year, the department and larger school host an Evening Lecture Series bringing together architects, other built environment professionals, artists, historians, and curators to discuss the ideas animating their work and the forces shaping their professions. The lecture series is increasingly attended by alumni and local professionals and is an important community resource. The fall 2023 series saw visits from notable architects including Eric Owen Moss and Marlon Blackwell, the historian Witold Rybczynski and the spring 2024 series commenced with a lecture by new department chair Rossana Hu

Self-Assessment
Direct Assessment
In coordination with NAAB's visit, the department has undertaken a comprehensive survey of alumni which collected broad data pertaining to career paths pursued by Weitzman Architecture graduates. The department's 2023 survey was sent to all alumni dating back to the 1950's and includes a more specific section on digital design tools which was received by more recent alumni from 2014 and later. The survey shows broadly the success of Weitzman Architecture in preparing our students for professional careers with 66% of responding alumni having graduated over 10 years ago being licensed, and 8% pursuing licensure. Of responding alumni that graduated less than 10 years ago, 35% are licensed with 50% pursuing licensure,

Indirect Assessment
Weitzman Architecture enjoys the participation of faculty, alumni, and local practitioners in several student employment endeavors. Portfolio Reviews, an internal event which occurs in both semesters of the academic year, allows students to present portfolios to multiple faculty members within a timed environment, allowing students to receive multiple points of view in a short time. Additionally, during the spring career fair, students prepare a resume and "design sheets" for review by professional organizations, alumni and local practitioners. The fair concludes with a social event attended by those attending the fair and the students. A virtual career fair is also held to engage prospective employers more broadly. Our active network of faculty and academic connections has enabled Weitzman Architecture to place students in internships in offices around the world including at BIG in Copenhagen, UN Studio in Amsterdam, and Snøhetta in Oslo. Weitzman Architecture also maintains strong ties to AIA Philadelphia and the east coast design community in general. Penn's location in Philadelphia is central to the northeast corridor, with our students regularly finding employment locally, as well as in Washington, DC, New York, and Boston.

PC.2 Design—How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities.

Program Response:
At Weitzman Architecture, the design studio remains the core and center of our robust curriculum. The design studios, and in particular the core studios, have been assessed annually to ensure that each studio builds on the previous and incorporates programs,

contexts, and issues pertinent to architecture's evolving relationship to the world. This includes the amplification of stakeholder engagement in all of the studios, a Public Commons sequence during the second year (Design Studios III and IV), and a commitment to funded travel opportunities in the advanced studios (Design Studios V and VI).

Design Studio Sequence and Structure:
The first four graduate studios compose the "core", with each studio bringing issues of urban sitting, design, and development, public space, and material and formal experimentation. The third studio is the Urban Housing Studio, where students engage problems of density and domestic habitation within an urban site containing an adaptive reuse component. The fourth core studio is the Comprehensive Design Studio, in which students work in teams of two (2) on the detailed design of a 35,000 square foot building proposal.

ARCH 5010 Design Studio I
Daniel Markiewicz, Coordinator
This course is the first of a four-semester long design sequence that constitutes the core studio curriculum within the Master of Architecture program at the Weitzman School of Design. This studio introduces specific modes of architectural thinking, design, and practice through a set of projects that examine the foundational topics of component order and assembly. The semester will examine part-to-whole relationships through digital design techniques, tectonic and material studies and physical fabrication.

ARCH 5020 Design Studio II
Annette Fierro, Coordinator
This studio explores urban architecture as an embodiment of cultural values. Analytical techniques for representing urban conditions are explored extensively. Students are challenged to interact with large, complex programs, individually determining one large component of the assigned program. Siting, enclosure of space and dimensions of public space and commons are stressed to challenge students to project relevant and inventive architectural situations. Large-scale site and ground plans are stressed in the development of the project.

ARCH 6010 Design Studio III (Urban Housing Studio)
Hina Jamelle, Coordinator
The third Core studio proposes the design of a 50,000 square foot, urban sited building that positions a new urban housing project with an existing structure. Students engage architecture in its role as a cultural agent and examine the way buildings establish and organize dynamic relationships between site, program and building materials. Urban access, relationship to siting, mass-transit, and the larger city will be considered. The curricular goals of the studio include the exploration of building massing, housing unit scale and variation, and the creation of hybrid forms of housing/dwelling as they relate to adaptive reuse and public programs within the urban environment.

ARCH 6020 Design Studio IV (Comprehensive Design Studio)
Nathan Hume, Coordinator
The fourth core studio aims to develop students' understanding of building design through the coordination, negotiation, and feedback of multiple constituents and consultants. The integration of site, structure, mechanical systems, envelope, and material are key to the development of the work. The organization of the semester works to give an understanding of how critical input from a host of expertise serves the design process. The students work alongside engineers, material specialists, and other consultants to gain new insight into building and construction constraints, processes, and opportunities. The projects, sited in urban contexts, are 35,000 square foot buildings which engage with the studio wide theme of the *Public Commons* - a term used for shared, equitable access of all communities to natural

resources such as air, oceans and wildlife as well as to social creations such as libraries, public spaces, technology and scientific research.

Advanced Design Studios:
During their third year, students enroll in an advanced design studio. Placement is through a lottery with 5-6 studios offered each semester. Each studio has a funded travel component and is taught by a diverse group of faculty and architects from practice from around the world.

ARCH 7010 Design Studio V
Ferda Kolatan, Coordinator
The fall Advanced Design Studio focuses on the dynamic transformations shaping the 21st-century city. These transformations are multi-faceted, deep-rooted, and impact all aspects of contemporary urban life. Studio topics encompass a wide range of themes, including technological innovations, sociopolitical and environmental challenges, and cultural and historical shifts that typify architecture in the urban realm today. All studios travel to domestic and international cities to engage local stakeholders and conduct research on site.

ARCH 7040 Design Studio VI
Ferda Kolatan, Coordinator
The sixth and final Design Studios offer an in-depth examination and exploration of relevant architectural subjects through critical conceptual thinking, rigorous research, and advanced design and representational methodologies. As the final studios in the M. Arch sequence, these studios lead inquiries into topical subjects and prepare students for lifelong engagement in the field. Studios are taught by leading practitioners in the field, who share their expertise with the students and equip them with the necessary tools to participate in the discipline at the highest level. All studios include travel to domestic and international destinations.

Additional Curricular Activities
At Weitzman Architecture, all students enroll in Visual Studies, a required three-course sequence that begins in the first year and is coordinated with the core design studios.

Required Courses
ARCH 5210 Visual Studies I
The course investigates architectural representation as the primary means for communication and development of an architect's work. Alongside the development of fundamental skills are weekly lectures on the history of representation exploring the introduction of new technologies, drawings relation to culture, and the impact on practice of representational turns.

ARCH 5220 Visual Studies II
The second course emphasizes drawings as generative devices which project possibilities rather than just documenting design decisions.

ARCH 6210 Visual Studies III
The final course integrates more dynamic modeling, texturing, and rendering applications to synthesize and propel work from the earlier semesters. The three-semester arc provides an understanding of contemporary drawing, modeling, and visualization techniques while creating the necessary grounding in the historical context needed to position one's work.

Self-Assessment
Direct Assessment
Beginning in Fall 2023, coordination across the studios was made more data-driven, with a series of deliverables and benchmarks across the semester being associated with shared

values put forth by the university, school, and department, and learning objectives within each studio. Learning objectives have become closely correlated with program and student criteria. Studio coordinators hold regular meetings with their studio faculty where goals are discussed, and work is reviewed to test outcomes.

Indirect Assessment
The Weitzman Student Council, or "StuCo" meets regularly with department leadership, and has hosted student events where "real-time polling" has taken place. While participation is not mandatory, it has been broad, with over 150 students participating in a discussion and dinner in November 2023. Such a method of collecting opinions, and data, has proved to be more comprehensive than design studio exit interviews, however, faculty are still encouraged to conduct these. StuCo leadership is heavily architectural and has focused recently on a student's overall wellness while at Weitzman.

Enhancement to Courses since the Last Review
Increased awareness of the School's DEI goals, and a particular engagement in the studios is supported by a multi-semester emphasis on *Public Commons*, and a response to the University's updated strategic plan. Public Commons is a term used for shared, equitable access to resources such as air, oceans, and wildlife as well as to social infrastructures such as libraries, civic programs, and open spaces that relate directly to the impact and success of dense housing in the city. Public Common Space in the architecture studios is launched as a catalyst to study the confluences of equity and inclusion through thoughtful inquiry. To allow points of view beyond the faculty, stakeholders from outside of the department and school are regularly engaged. An assessment goal of this outreach is ensuring each studio has access to outside stakeholders.

PC.3 Ecological Knowledge and Responsibility—How the program instills in students a holistic understanding of the dynamic between built and natural environments, enabling future architects to mitigate climate change responsibly by leveraging ecological, advanced building performance, adaptation, and resilience principles in their work and advocacy activities.

Program Response:
Curricular Activities
At Weitzman Architecture, we believe living and operating in the Anthropocene will be the single greatest challenge our students face as they engage 21st century practice.

Required Courses
ARCH 6310 D^3 Details, Data and Delivery
Franca Trubiano
The course focuses on advanced subjects in project delivery of buildings, subjects inclusive of Biogenic and Carbon Responsive Materials and Details, Environment, Resiliency, Fossil Fuel Free Building Systems Integration, Advanced Fabrication, Robotic Manufacturing, and Building Labor, and Computational Workflows, Artificial Intelligence, and Simulating Building. Students study complex, integrated, and sustainably determined buildings seeking their systems based, technological, and labor-based innovations. Students engage in advanced research methods and forensic analysis of artifacts and primary source documents associated with the material detailing, fabrication, data-scaping, virtualizing, simulating, and workflow planning of building projects. Students organize the collection of first-hand/primary source information and interview members of the project delivery team. Identifying how, why, and to what end products and practices are deployed in the construction of innovative projects is the goal.

ARCH 6330 Environmental Systems I
Dorit Aviv

The course covers the role of environmental systems in building design, and the application of the principles of building science such as the building heat balance, solar heat gain and daylighting in the early building design, through calculations and simulations. Issues of climate, health and environmental sustainability are explored as they relate to architecture in its natural context. The classes include lectures, site visits and lab sessions.

ARCH 6340 Environmental Systems II
Eric Teitelbaum
The second course in the Environmental Systems sequence considers the environmental and global systems of larger, more complex buildings. Contemporary buildings are characterized by the use of systems such as ventilation, heating, cooling, dehumidification, lighting, acoustics, and controls that not only have their own demands, but interact dynamically with one another. On a global scale, factors that connect the built environment to carbon emissions are explored, developing careful and rigorous analysis techniques to minimize both lifecycle and operational carbon emissions of buildings. As more buildings over the coming decades become all-electric, frontiers and opportunities for novel system design are explored.

Elective Courses
At Weitzman Architecture, a wide array of elective courses provides students with focused study into ecology, environmental sustainability, and anthropogenic engagement. These courses include:

ARCH 7322 Tech Elective: Daylighting
Janki Vyas

ARCH 7324 Tech Elective: Parametric Life Cycle Assessment for Buildings
Kayleigh Houde

ARCH 7326 Tech Elective: Embodied Carbon and Architecture
Stephanie Carlisle

ARCH 7360 Seeing Architecture
Richard Garber, AIA

Non-Curricular Activities
Research in the areas of ecological literacy and environmental responsibility is supported by a number of sources and occurs within interdisciplinary laboratories at Weitzman Architecture.

Center for Environmental Building Design
The Center for Environmental Building + Design (CEBD) is a faculty research unit and consultancy at the University of Pennsylvania Weitzman School of Design dedicated to improving the environmental behavior and operation of buildings and cities. We work closely with the Thermal Architecture Lab and in a larger assembly and testing space at the Pennovation campus.

Kleinman Center for Energy Policy
The Kleinman Center's mission is to create the conditions for policy innovation that support a just and efficient transition to sustainable energy. The center's vision is an energy system that optimizes productivity through smart demand, sustainable supply, and compensated externalities.

Thermal Architecture Lab

The Thermal Architecture Lab focuses on the intersection of thermodynamics, architectural design, and material science. The Lab was founded by Dorit Aviv, Assistant Professor of Architecture. The lab examines the building's form and materials from the perspective of thermodynamics, as active agents in the transfer of heat between the human body and its environment. Research topics include novel technologies and design strategies to simultaneously reduce buildings' energy demand and provide thermal shelter to people in a warming world.

Advanced Courses of Study
Weitzman Architecture offers advanced study leading to a Master of Science in Design, including the MSD in Environmental Building Design (MSD-EBD) with one- and two-year tracks. The MSD in Environmental Building Design (MSD-EBD) is a research-oriented, post-professional degree focused on innovation in the integration of performance analysis and architectural design. Students share a year of required courses with students in the 2-semester program and can continue for a second year of research and innovation. The program is based on the exploration of techniques for developing and evaluating novel design proposals, including prototyping, monitoring, and modelling. The second year focuses on a design-based research project that combines invention with evidence-based design and performance analysis. The year culminates in a design review and the preparation of an article for publication.

Self-Assessment

Direct Assessment
Students participating in required courses that convey Ecological Knowledge and Responsibility produce projects and research papers that are reviewed and graded by faculty. The content of these courses is regularly explored in design studios, especially in the third year Design Research Studios. The integration of mechanical and systems thinking is a learning objective of ARCH6020, the department's Comprehensive Design Studio.

Indirect Assessment
The impact of climate change on the workings of architects and the broad environment is ubiquitous, and outside of specific coursework in lecture and studio courses, our students engage in these topics through participation in department and school events, lectures, and symposia, including those curated by the Kleinman Center for Energy Policy. Some 80% of all required courses touch upon climate, either directly in the Environmental Systems sequence, or indirectly in the design studios and history and theory courses. Students participate in research being conducted in various labs including Assistant Professor Aviv's Thermal Architecture Lab. A concerted effort will be made by the department in coming years to further integrate ecological and climate thinking into our direct coursework.

Enhancement to Courses since the Last Review
Since 2016, the department has hired new assistant professors including Dorit Aviv, Laia Mogas Soldevila, Masoud Akbarzadeh, and Robert Stuart-Smith, each with a specific interest in sustainability as it relates to architectural research. These faculty all direct their own labs, furthering ecological thinking in Weitzman Architecture's curriculum and research breath.

PC.4 History and Theory—How the program ensures that students understand the histories and theories of architecture and urbanism, framed by diverse social, cultural, economic, and political forces, nationally and globally.

Program Response:
The Weitzman Architecture faculty includes several internationally recognized historians and theorists of architecture and the built environment. The History and Theory sequence in the Master of Architecture program benefits from the ongoing research in the Ph.D. Program in

Architecture. The program produces a body of graduates who act as a reflective leaven to the architectural profession, providing an historical and/or theoretical context for current practice.

Since the last accreditation in 2015, two global faculty searches have been conducted to augment our History and Theory faculty, and a long-term commitment was extended to Joan Ockman who continues to anchor the History and Theory curriculum. Daniela Fabricius, who has taught at Penn in an adjunct capacity since 2006, joined the faculty in 2022 as Assistant Professor. Two additional full-time faculty appointments were given in 2023: Fernando Lara, who joined the faculty as Professor, works on theorizing spaces of the Americas with an emphasis on the dissemination of design ideas beyond traditional disciplinary boundaries, and Vanessa Grossman, who joined the faculty as Assistant Professor, addresses the intersections of architecture with ideology, housing and governments, with a special focus on Cold War-era Europe and Latin America. Together, the faculty augment Weitzman's global focus in our core History/Theory sequence.

Curricular Activities

ARCH 5110 History and Theory I, ARCH 5120 History and Theory II, and ARCH 6110 History and Theory III have been expanded through this global focus, with each course extending content and knowledge through diverse cultural inputs.

ARCH 5110 History and Theory I

Joan Ockman, Fernando Lara, Daniela Fabricius

This overview of the history of architecture from the mid-nineteenth century through World War II places modern architecture's evolution into global perspective, taking into account not just transformations in architectural aesthetics and building practices around the world but also the broader sociopolitical, economic, technological, environmental, and intellectual forces that influenced them. We consider changing modes of production and reception, disciplinary and institutional innovations, animating debates, and global interdependencies and interchanges. Going well beyond iconic buildings and canonical "isms," we pose the following questions: In what ways did the new architecture of the period respond to, participate in, and mediate the unprecedented experiences of modernizing societies? How did urban and environmental crises, colonial enterprises and devastating wars, national and international agendas, social changes, and technological advances affect architects' understanding of the spaces they were called upon to design? How did tensions between modernizing forces and local or vernacular ways of building play out? How, in turn, did buildings and projects reflect different societies' self-images and future aspirations? What can architecture's manifestations over the course of this formative period tell us about the emergent modern world? In attempting to answer these questions, we take note of shifting historiographic paradigms and reflect on the genealogical relationship and relevance of this epoch to architectural thought and practice today.

ARCH 5120 History and Theory II

ARCH 5120 continues topics introduced in ARCH5110. Beginning in the midst of World War II, it traces the evolution of architecture culture up to the twenty-first century against the background of an increasingly complex and interconnected world. We are concerned with both material and ideological changes and with key architectural protagonists, projects, and contexts, and the impact on them of external historical forces. Lectures move roughly chronologically through a varied array of issues, among them: postwar reconstruction and planning; the cultural dimensions of the Cold War; the rising critique of interwar modernism; the emergence of new technologies and postindustrial processes; the burgeoning of suburbanization, consumer culture, and mass media; neo-avant-garde approaches to form and space; the impact of new social and political movements; postmodernism; globalization and the advent of digital culture; and environmental, social, and geopolitical challenges at the turn of the century. As in the previous semester, the course is intended to provide students

with broad knowledge of the architectural history of the period under study and an understanding of architecture's role and agency in a changing global world.

ARCH 6110 History and Theory III
Fernando Lara, Daniela Fabricius, Vanessa Grossman
This course builds on the previous History/Theory sequence (ARCH 5110 and ARCH 5120), moving from an emphasis on history to focus on contemporary theories of architecture. The goal is to build literacy in contemporary architectural discourse as it relates to contemporary design culture. Students gain awareness of where the field of architectural theory currently stands, especially in terms of societal and technological developments. Lectures and discussions look at the aesthetic, political, and ethical implications of design, and consider the global context of architecture in light of climate change and emerging building and design technologies. Students gain skills in reading and discussing theoretical texts and learn how to better articulate their own critical thinking and positioning in the field.

Elective Courses

ARCH 7120 Spatial Justice Collective: Study and Praxis in Philadelphia - A Collaboration with the Philly Peace Park
Rashida Ng, Eduardo Rega Calvo
Through a critical spatial lens, this course advances discourse in social justice activism as it informs transformative design practices. Addressing various themes of study around forms of institutional violence and liberatory activism, the course engages in intersectional study of geography, sociology, urban planning, and the arts. It examines topics such as anti-racism; decoloniality and land; civil resistance; housing justice; indigenous practices; solidarity economics; critical ecology and climate justice; food sovereignty; and healing justice. The course is conceived in solidarity and collaboration with the Philly Peace Park and the Peacetown Community Land Trust. It is structured in relation to their organizing principles as an open and community-operated campus. Sessions include public events, discussions of relevant theory, and the fabrication of a designed artifact to be installed at the park. These collective endeavors will deepen our understanding of the complexities of systems of oppression while actively contributing to the development of radical spatial justice discourse.

ARCH 7120 Baroque Parameters - Topics in Architecture Theory II
Andrew Saunders
The course provides an overview of the debate surrounding the term Baroque and its contemporary implications. The term Baroque is the subject of many debates ranging from its etymological origin, to disputes on the emergence of an aesthetic "style" post Council of Trent in the seventeenth century by historians such as Heinrich Wölfflin, and the more current and most broad application of the term as a recursive philosophical concept suggested by Gilles Deleuze to "Fold" through time. Although illusive and as dynamic as the work itself, students become familiar with how the term Baroque has been associated with specific characteristics, attitudes and effects or more specifically the architectural consequences it has produced.

ARCH 7150 Contemporary Aesthetic Theory
Daniela Fabricius
This course offers a framework for a provocative history of ideas about beauty as they relate to contemporary thinking and their production of form in architecture. In a world increasingly defined by visuality, the concepts of beauty and visual sensation are not mere intellectual exercises but standards that define the very nature of design practice across disciplines, and that are essential to the worlds of objects, automobiles, furniture, and architecture in the twenty-first century. Aesthetic theory is about beauty and about form and how it affects us every day. As architecture practice changes, the tools that are used to create form change due to new technologies, new materials and new tools for fabrication and aesthetics gives us an important way in to understanding the relationship between the object created and the

user. This occurs in contemporary cultural landscapes in which we exist, and aesthetics is the organizing element. Through lectures and discussions of aesthetics readings in recitations focused on the object, students' term papers bring a clear understanding of aesthetics and its role in participating in culture through the objects of the automobile, furniture, and architecture industries.

ARCH 7180 History and Theory of Architecture and Climate
Ariel Genadt
This history and theory seminar aims to equip students with a multifaceted understanding of key challenges and opportunities in designing climate-sensitive architecture in the 21st century, in view of the instabilities brought about by climate change and other human-inflicted disruptions to our planet's ecosystems. It demonstrates how creative design ideas and applications can arise from cross-cultural pollination. The lectures, readings and student research draw on both vernacular buildings and authored case studies and theories in an array of contexts, diverse cultures living within a range of climates on all continents. The seminar's theoretical premise is that architecture and climate have always affected one another, even if the awareness of architecture's effects on climate change is recent. As a term project, students research and compare case studies, and present them graphically and verbally. The seminar is open to all graduate architecture students. The course is a core requirement for the MSD-EBD degree.

ARCH 8140 The Concept of an Avant-Garde
Joan Ockman
This seminar has a double focus: on the concept and efficacy of avant-gardes in architecture, and on a close reading of Manfredo Tafuri's extraordinary book on this subject, *The Sphere and the Labyrinth: Avant-Gardes and Architecture from Piranesi to the 1970s*. No historian of architecture has written as intensely about the contradictions of architecture in late-modern society or reflected as deeply on the resulting problems and tasks of architectural historiography as Tafuri (1935-1994). For many, the Italian historian's dismissal of "hopes in design" under conditions of advanced capitalism produced a disciplinary impasse. This in turn led to calls to *oublier* (forget) him- to move beyond his pessimistic and lacerating stance. The seminar undertakes a close reading of one of Tafuri's most complexly conceived and richly elaborated books. Initially published in Italian in 1980 and translated into English in 1987, *The Sphere and the Labyrinth* is a seminal effort to define and historicize the concept of an avant-garde specifically in architecture. Its content centers on the radical formal and urban experiments of the first three decades of the twentieth century. Yet surprisingly Tafuri begins his account with the eighteenth-century inventions of Piranesi, and he concludes with an examination of the "neo-avant-gardes" of his own day. In addition to traversing *The Sphere and the Labyrinth* chapter by chapter - starting with the formidable methodological introduction, "The Historical 'Project'"-we also read a number of primary and secondary sources on the historical contexts under discussion and consider a number of important intertexts that shed light on Tafuri's arguments. The objectives of the course are at once historical and historiographic: we are concerned both with actual events and with how they have been written into history. We conclude by reassessing the role of avant-gardes in architecture. Is the concept of an architectural avant-garde still viable today? Or should it be consigned to the dustbin of twentieth-century ideas?

Non-Curricular Activities
Advanced Degree Programs: Doctor of Philosophy
The Weitzman Architecture Ph.D. Program in Architecture is committed to the productive creation of critical knowledge in Architecture that brings value to the built environment. Architecture as a discipline has, since the first century AD, had its own theory, codex, and principles that have guided its craftspeople, scientists, builders, designers, theorists, and architects. For centuries, architects have published essays, treatises, and research on topics material, topographical, technological, political, and aesthetic. Amongst the many questions

our students explore today are those which actualize the discipline's hundreds of years of recorded and vernacular knowledge, and which leverage our ever-increasing desire to invent and mobilize emergent, innovative technologies in service to making, fabricating, building, and research.

Administered by the Graduate Group in Architecture, the Ph.D. program in Architecture activates the intellectual space between disciplinary and interdisciplinary studies, envisioning new opportunities for those committed to enquiry, debate, critical thinking, invention, added value, and justice in the built environment. Whether in the production of ideas, words, data, scripts, systems, material studies, or fabrications, our students advance knowledge in service to living better, more equitable, and ethical lives.

Students in the PhD program in Architecture are expected to teach or serve as research assistants during their course of study, and regularly participate in the three required History and Theory courses and the Structures courses in the Master of Architecture sequence.

Weitzman Architecture is fortunate to share space in the Stuart Weitzman School of Design with the Fine Arts Department, and architecture students can take advantage of fine arts offerings as elective courses.

Symposia, Events, Publications and Exhibitions
In addition to the department's Evening Lecture Series, the History and Theory faculty curate a smaller lecture series with up to four lectures each semester. Lectures are synchronized with required History and Theory courses and are also open to the entire Weitzman student body. Care is taken to bring in speakers who represent a wide array of architectural ideas and theory; speakers in fall 2023 included Paulo Tavares, Kadambari Baxi, and Charles Davis II. The spring 2024 series includes Rachel Lee, Carlos Eduardo Dias Comas, Zhongjie Lin, and Sarah Lopez.

Self-Assessment
Direct Assessment
A curricular discussion about History Theory was initiated in 2022 by Joan Ockman, Winka Dubbeldam, Daniela Fabricius, and Fernando Lara. This discussion continues today under the new department leadership, and now includes faculty member Vanessa Grossman. The History and Theory Committee has encouraged an expansion of the array of electives to reflect a diversity of perspectives in vernacular and non-Western histories of architecture and to offer contemporary theoretical approaches to race, environment, and social justice. All history and theory courses include letter-graded exams and term papers, as well as assessments of class participation and oral presentations.

Indirect Assessment
Concerted efforts are made to include discussions of history and theory in studio reviews and special lectures, including the lunchtime history and theory lecture series. The latter is attended by students enrolled in the core history and theory courses and is also attended by others in allied programs and departments in the Weitzman School. Weitzman Architecture has anecdotally witnessed an increase in the number of students pursuing advanced study in history and theory, with several currently matriculating students actively applying to Ph.D. or other academic postgraduate programs.

Enhancement to Courses since the Last Review
The History and Theory faculty take part in design reviews. They are aware of design studio work concurrent with their own courses and seek to introduce historical and theoretical perspectives into the design studio through increased coordination. For instance, the introductory history course, ARCH 5110, which traces the early history of the high-rise building, ties directly to the program in the introductory design studio, ARCH5010, where the

first exercise is the construction of a large-scale model of a mixed-use tower. Similarly, ARCH 6110, which deals with housing in relation to contemporary issues of race, gender, and justice, is coordinated with ARCH 6010, the Urban Housing Studio. These cross-pollinations between history and theory content and design studio projects afford students a richly integrated curriculum.

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.

Program Response:
Curricular Activities
Students are introduced to applied research within a design context in the first year, with the concept being addressed through ideas of context, environmental, and technological concerns. Research and Innovation are explicitly engaged within two required courses, ARCH 6360 Material Formations, and in ARCH 7040, the final Design Research Studio. Master of Architecture students may opt to replace the latter with a final design thesis.

ARCH 6310 D^3 Details, Data, Delivery
Franca Trubiano
This course is focused on advanced subjects in the project delivery of buildings, subjects inclusive of Biogenic and Carbon Responsive Materials and Details, Environment, Resiliency, and Fossil Fuel Free Building Systems Integration, Advanced Fabrication, Robotic Manufacturing, and Building Labor, and Computational Workflows, Artificial Intelligence, and Simulating Building. Students study complex, integrated, and sustainably determined buildings seeking their systems based, technological, and labor-based innovations. Students engage in advanced research methods and forensic analysis of artifacts and primary source documents associated with the material detailing, fabrication, data-scaping, virtualizing, simulating, and workflow planning of building projects. Students organize the collection of firsthand/primary source information and interview members of the project delivery team. Identifying how, why, and to what end products and practices are deployed in the construction of innovative projects is the goal.

ARCH 6360 Material Formations
Robert Stuart-Smith, Jeffery Anderson, Patrick Danahy
Architectural design involves the incorporation of numerous technical and creative considerations that must be weighted and synthesized, and ultimately embodied in an architectural work's material outcome. The effectiveness of this endeavor is tightly related to a design's alignment with design-engineering, material and production constraints and opportunities. The building industry is increasingly adopting automated methods both in design and engineering software, and robotic means of fabrication and construction to decrease material, environmental and time costs. The discipline of architecture must not only keep pace with these developments, but also develop a creative and critical approach to the increasingly automated means by which buildings are designed and realized, re-casting it as an opportunity to engage in design with greater degrees of holistic thinking, while engaging in material and production decisions.

ARCH 7040 Advanced Design Research Studio VI
Ferda Kolatan, staff
The final Design Studios offer an in-depth examination and exploration of relevant architectural subjects through critical conceptual thinking, rigorous research, and advanced design and representational methodologies. As the final studios in the M. Arch sequence, these studios lead inquiries into topical subjects and prepare students for lifelong engagement in the field. Studios are taught by leading practitioners in the field, who share their expertise with the students and equip them with the necessary tools to participate in the

discipline at the highest level. All studios include travel to domestic and international destinations.

ARCH 7060 Honors Thesis Program
Annette Fierro, staff
The thesis program is offered to a select group of students who apply and qualify through two rounds of assessment, comprising typically 6-10 students. The summer and fall semester serve to develop research of interests individual to students, with the help of faculty advisors, who critique individually and as a group in a workshop format. Design projects are developed in the spring semester. Besides final reviews, students are expected to document their work in a book format.

Elective Courses

ARCH 7310 Experiments in Structures
Mohamad Al Kayer
This course studies the relationships between geometric space and those structural systems that amplify tension.

ARCH 7320 Matter, Making and Testing: Designing with Next Generation Precast Concrete
Richard Garber
This seminar will focus on precast concrete and specifically its history, materiality – how it is manufactured and the logistics of its assembly - and cultural affects through both its traditional uses within the urban environment as well as new approaches to building typologies such as housing.

ARCH 7325 Tech Designated Elective: Inquiry into Biomaterial Architectures
Laia Mogas-Soldevila
Traditional building materials are environmentally- and economically expensive to extract, process, transport or recycle, their damage is non-trivial to repair, and have limited ability to respond to changes in their immediate surroundings.

ARCH 7540 Performance Design Workshop
Jihun Kim
Environmental systems have been developed and applied in buildings to improve thermal comfort and to reduce energy use.

ARCH 8120 Methods in Architectural Reseaerch
Franca Trubiano
This seminar is aimed at first year, second semester PhD and MS students in Architecture and M. Arch students interested in advanced forms of academic research.

Non-Curricular Activities
A variety of department-led research laboratories and centers perform funded advanced research in the areas of structural design, material, and environmental science. Students can participate in the work of these labs and centers through coursework or research assistant appointments available through the architecture department.

Autonomous Manufacturing Lab
Led by Assistant Professor Robert Stuart-Smith, the Autonomous Manufacturing Lab (AML-Penn) explores the integration of design and production within robotic processes of building manufacturing. The economic and environmental cost of building is able to be reduced through increases in the intricacy and complexity of design and engineering solutions. This, however, is dependent on the design possibilities and production efficiencies of building manufacturing processes. Beyond industrial automation, autonomous and semi-autonomous

manufacturing are able to provide embodied forms of decision making, providing new opportunities for bespoke fabrication where adaptive processes can actively engage with the formation and physical manipulation of materials in novel ways. The interdisciplinary AML lab aims to develop innovative methods of manufacturing that leverage real-time robotics, computation, sensor and computer vision technologies within generative design processes, in order to expand the creative and practical possibilities of design through a direct engagement with the physical world of manufacturing.

Polyhedral Structures Lab
PSL is at the intersection of architecture, structural and mechanical engineering, computer science, mathematics, and material science. It aims to bridge the gap between design and engineering by advancing structural geometry and reconciling function, form, technology, and energy. The PSL is directed by Assistant Professor Dr. Masoud Akbarzadeh.

Center for Environmental Building Design
The Center for Environmental Building + Design (CEBD) is a faculty research unit and consultancy at Weitzman School of Design dedicated to improving the environmental behavior and operation of buildings and cities. They work closely with the Thermal Architecture Lab and share a workspace in Meyerson Hall and a larger assembly and testing space on the Pennovation campus.

Thermal Architecture Lab
The Thermal Architecture Lab focuses on the intersection of thermodynamics, architectural design, and material science. The Lab is directed by Assistant Professor Dr. Dorit Aviv.
The building sector produces nearly 40% of total global CO2 emissions, and almost half of the direct energy consumption in buildings is due to mechanical heating, cooling and ventilation demand. As the master-builders in charge of building design from concept to construction details, architects can take an active role in the effort to make buildings more energy efficient. The lab examines the building's form and materials from the perspective of thermodynamics, as active agents in the transfer of heat between the human body and its environment. Novel technologies and design strategies are researched to simultaneously reduce buildings' energy demand and provide thermal shelter to people in a warming world.

DumoLab Research (DLR)
DumoLab Research at the University of Pennsylvania Weitzman School of Design started operations in 2022 and is directed by interdisciplinary architect Dr. Laia Mogas-Soldevila. Exploring materials as new design companions, the lab develops architectures that nurture both the human body and planet Earth with research areas including ambient-conditions manufacturing, augmentation of hyper-local material systems, environmentally interactive bio-composites, and inclusive and equitable material practices.

Kleinman Center for Energy Policy
The Kleinman Center's mission is to create the conditions for policy innovation that support a just and efficient transition to sustainable energy. Our vision is an energy system that optimizes productivity through smart demand, sustainable supply, and compensated externalities. We engage student learners by providing energy-related courses, a certificate program, lectures, internship opportunities, and grants for research and professional development. We support Penn research through competitive grants, seminars, and lectures. We also bring distinguished energy leaders and scholars to Penn for visits and residencies. We convene thought leaders with diverse interests from academia, industry, and government for productive conversations that lead to policy action.

<u>Student and Faculty Initiatives</u>
The Weitzman School supports a variety of faculty initiatives corresponding to their work as scholars and teachers at Penn. Weitzman Architecture's faculty and students publish and

lecture internationally and participate in academic conferences and symposia as well as design competitions.

Weitzman Architecture was the host of the 2022 annual conference of the Association for Computer Aided Design in Architecture (ACADIA), themed *Hybrids and Haecceities*. The conference explored novel approaches to design and research that dissolve binary conditions and inherent hierarchies in order to embrace new modes of practice. Haecceities describe the qualities or properties of objects that define them as unique. Concurrently, Hybrids are entities with characteristics enhanced by the process of combining two or more elements with different properties. In concert, these terms offer a provocation toward more inclusive and specific forms of computational design.

Penn facilitates a wide range of innovation-focused initiatives to all members of our community. These consist of courses, clubs and student organizations, as well as libraries, laboratories, and research centers that include:

Pennovation Center
The Pennovation Center is a university-wide business incubator and laboratory that aligns and integrates researchers, innovators, and entrepreneurs for the commercialization of research discoveries. Intended to marry entrepreneurs with an expert workforce and scientifically advanced facilities, key features of the Pennovation Center are the common creative spaces, including coworking areas, a cafe, and a venue for events and programs. There are Weitzman-specific labs at the center.

The Humanities + Urbanism + Design Initiative
The Humanities + Urbanism + Design Initiative bridges the humanities and design disciplines to promote the integrated investigation of 21st century urbanism and architecture at the University of Pennsylvania. The project was launched by a generous award from the Andrew Mellon Foundation in 2013, which was renewed in 2018. The renewed grant is specifically devoted to “The Inclusive City” and has twin objectives: to stimulate inter- and multi-disciplinary work on diversity and inclusion in the built environment and to build an increasingly diverse and inclusive community of scholars who do this work.

Self-Assessment
Direct Assessment
Weitzman Architecture’s approach to innovation and its assessment lies within faculty output, and its relationship to both coursework and research conducted at Penn. Design work and funded research being conducted by faculty directly relates to their teaching of required courses. For instance, Assistant Professor Masoud Akbarzadeh’s funded research in the Polyhedral Structures Laboratory informs his teaching of structures to our students. Professor of Practice Marion Weiss typically offers Advanced Research Studios each spring that share sites or programs with the innovative work she is executing in her firm. Faculty work is regularly published in academic journals and conferences or recognized through awards programs. Several of the faculty teaching in the Urban Housing Studio, including Scott Erdy, Richard Garber, and Brian Phillips, have had professionally executed housing projects recently recognized through awards programs including by the American Institute of Architects. This relationship between innovative work and teaching offers our students a more comprehensive understanding of avant practices surrounding the field of architecture.

Indirect Assessment
Students are directly assessed by faculty on work produced in these courses, but also afford a level of interaction with outside consultants, stakeholders, and other “clients” that provoke strategies for innovative solutions informed by those beyond the immediate Weitzman community. These include local community stakeholders from Philadelphia in the first-year

studios and non-local actors who provide a more global perspective as a backdrop to the work being done in the Advanced Research Design Studios.

Enhancement to Courses since the Last Review
The relationship between innovation and stakeholder input is evidenced in all design studios, and particularly in the second-year studios, where since 2020 the addition of the Public Commons challenges students to think about novel organizations to housing or community building-types, and their setting within varied contexts. Additionally, the ARCH 6020 Comprehensive Design Studio has received additional funding to allow for input by engineering consultants, allowing students to work through their ideas to a higher level of resolution.

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.

Program Response:
The curriculum at Weitzman Architecture allows students to develop leadership skills while engaging in collaborative aspects of the discipline throughout the course of study. Collaboration and leadership are central to the design studio sequence at Penn, where most studios commence with a collaborative research phase, in which students will cull information for individual or teamwork. Stakeholder input is sought in many of the studios and is amplified in the second year *Public Commons* sequence in Studio III and Studio IV, in which students integrate the design of a public commons in their work. Public Common Space for the architecture studios is launched as a catalyst to study the confluences of equity and inclusion through thoughtful inquiry. To allow points of view beyond the faculty, stakeholders from outside of the department and school are regularly engaged.

Core Design Studios
ARCH 5010 Design Studio I
Daniel Markiewicz, staff
This course is the first of a four-semester long design sequence that constitutes the core studio curriculum within the Master of Architecture program at the Weitzman School of Design. This studio introduces specific modes of architectural thinking, design, and practice through a set of projects that examine the foundational topics of component order and assembly. The semester will examine part-to-whole relationships through digital design techniques, tectonic and material studies, and physical fabrication. The semester will culminate with the design of a small institutional extension that allows students to apply these foundational concepts to architectural space.

ARCH 6010 Design Studio III
Hina Jamelle, staff
The third Core studio proposes the design of a 50,000 square foot, urban sited building that positions a new urban housing project with an existing structure. Students engage architecture in its role as a cultural agent and examine the way buildings establish and organize dynamic relationships between site, program and building materials. Urban access, relationship to siting, mass-transit, and the larger city will be considered. The curricular goals of the studio include the exploration of building massing, housing unit scale and variation, and the creation of hybrid forms of housing/dwelling as they relate to adaptive reuse and public programs within the urban environment.

ARCH 6020 Design Studio IV
Nathan Hume, staff

The fourth core studio aims to develop students' understanding of building design through the coordination, negotiation, and feedback of multiple constituents and consultants. The integration of site, structure, mechanical systems, envelope, and material are key to the development of the work. The organization of the semester works to give an understanding of how critical input from a host of expertise serves the design process. The students work alongside engineers, material specialists, and other consultants to gain new insight into building and construction constraints, processes, and opportunities. The projects, sited in urban contexts, are 35,000 square foot buildings which engage with the 600-studio wide theme of the Public Commons - a term used for shared, equitable access of all communities to natural resources such as air, oceans and wildlife as well as to social creations such as libraries, public spaces, technology and scientific research.

Advanced Design Studios
ARCH 7010 Design Studio V
Ferda Kolatan, staff
The fall Advanced Design Studio focuses on the dynamic transformations shaping the 21st-century city. These transformations are multi-faceted, deep-rooted, and impact all aspects of contemporary urban life. Studio topics encompass a wide range of themes, including technological innovations, sociopolitical and environmental challenges, and cultural and historical shifts that typify architecture in the urban realm today. All studios travel to domestic and international cities to engage local stakeholders and conduct research on site.

ARCH7040 Design Studio VI
Ferda Kolatan, staff
The sixth and final Design Studios offer an in-depth examination and exploration of relevant architectural subjects through critical conceptual thinking, rigorous research, and advanced design and representational methodologies. As the final studios in the M. Arch sequence, these studios lead inquiries into topical subjects and prepare students for lifelong engagement in the field. Studios are taught by leading practitioners in the field, who share their expertise with the students and equip them with the necessary tools to participate in the discipline at the highest level. All studios include travel to domestic and international destinations.

Elective Courses

ARCH 7323 Technology Designated Elective: Geometric Structural Design
Masoud Akbarzadeh
This course provides a comprehensive introduction to novel geometric methods of structural design based on 2D and 3D graphical statics. Special consideration will be given to material and computational methods for the detailed design of joinery and its assembly process.

ARCH 7390 New Approaches to an Architecture of Health
Mikael Avery
Health care is being refocused from episodic care for those who are ill or symptomatic to providing life-long care geared towards maintaining wellness.

ARCH 7510 Ecology, Technology, and Design
William Braham
This course will examine the ecological nature of design at a range of scales, from the most intimate aspects of product design to the largest infrastructures, from the use of water in bathroom to the flow of traffic on the highway.

Self-Assessment
Direct Assessment

Direct assessment of student learning is directly evidenced in the evaluation of coursework by faculty and guests/external consultants. In the case of design studio, student reviews at the mid- and end of term are largely used to assess work. Midterm and Final reviews at Penn are public events, open to the community, and attended by guests from peer institutions and professional practice. Seminars conducted in collaboration with outside consultants, such as Richard Garber's Matter, Making, and Testing, culminate in the production of a full scale 1:1 mock-up or panel produced with the assistance, and review, of the industry sponsor. Students interacting with representatives from the sponsor have many opportunities for real-time feedback prior to the presentation of final work.

Indirect Assessment
The results of the alumni survey undertaken by Weitzman Architecture in fall 2023 have shown that a great portion of our alumni are in leadership positions in their professional situations and suggests their experience at Penn was formative in accomplishing a high level of achievement in the profession. This evidence-based approach to more specifically understanding alumni achievement allows us to provide better outreach in the programs, lectures, and events alumni typically attend at Penn. It additionally impacts our circular development, by aligning student learning objectives with placement in alumni firms.

Within the department, past Chair Winka Dubbeldam regularly met with students to understand concerns and provide a safe and open forum for discussion of Weitzman activities and culture. This pattern continued in fall 2023, with Acting Chair Andrew Saunders, who also directs the M. Arch program.

Design studios and funded seminars are by nature collaborative, with students interacting with critics, stakeholders, and industry professionals. While these interactions give students some insight into more formal practice activities, they more importantly convey the importance of collaboration in any creative design endeavor. The navigation of this process is critical to student learning and ultimately success.

Enhancement to Courses since the Last Review
The hiring of new full-time faculty and an increase in funded research has led to the creation of several labs and other collaboration-based endeavors. Coupled with more directed stakeholder involvement in design studios, opportunities for collaboration between students and those outside of Penn continues to increase. The impact these efforts have had on our students is evidenced in student course assessments. These initiatives in turn cultivate leadership in our student body and ultimately better prepare them for professional practice,

PC.7 Learning and Teaching Culture—How the program fosters and ensures a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among its faculty, students, administration, and staff.

Program Response:
Since 2020, Weitzman Architecture has enabled changes to our curriculum and broader Weitzman environment to respond to the evolving culture of architecture school. The policies set forth by the American Institute of Architects Students (AIAS) organization with respect to these issues and have ensure that Weitzman Architecture is not only aware of, but anticipates, evolution in the way we teach, what we expect of our students and faculty, and the creation of an open and positive environment for architectural experimentation.

Core Design Studios
ARCH 5010 Design Studio I
Daniel Markiewicz, staff
This course is the first of a four-semester long design sequence that constitutes the core studio curriculum within the Master of Architecture program at the Weitzman School of

Design. This studio introduces specific modes of architectural thinking, design, and practice through a set of projects that examine the foundational topics of component order and assembly. The semester will examine part-to-whole relationships through digital design techniques, tectonic and material studies, and physical fabrication. The semester will culminate with the design of a small institutional extension that allows students to apply these foundational concepts to architectural space.

ARCH 5020 Design Studio II
Annette Fierro, Coordinator
This studio explores urban architecture as an embodiment of cultural values. Analytical techniques for representing urban conditions are explored extensively. Students are challenged to interact with large, complex programs, individually determining one large component of the assigned program. Siting, enclosure of space and dimensions of public space and commons are stressed to challenge students to project relevant and inventive architectural situations. Large-scale site and ground plans are stressed in the development of the project.

ARCH 6010 Design Studio III
Hina Jamelle, staff
The third Core studio proposes the design of a 50,000 square foot, urban sited building that positions a new urban housing project with an existing structure. Students engage architecture in its role as a cultural agent and examine the way buildings establish and organize dynamic relationships between site, program and building materials. Urban access, relationship to siting, mass-transit, and the larger city will be considered. The curricular goals of the studio include the exploration of building massing, housing unit scale and variation, and the creation of hybrid forms of housing/dwelling as they relate to adaptive reuse and public programs within the urban environment.

ARCH 6020 Design Studio IV
Nathan Hume, staff
The fourth core studio aims to develop students' understanding of building design through the coordination, negotiation, and feedback of multiple constituents and consultants. The integration of site, structure, mechanical systems, envelope, and material are key to the development of the work. The organization of the semester works to give an understanding of how critical input from a host of expertise serves the design process. The students work alongside engineers, material specialists, and other consultants to gain new insight into building and construction constraints, processes, and opportunities. The projects, sited in urban contexts, are 35,000 square foot buildings which engage with the 600-studio wide theme of the Public Commons - a term used for shared, equitable access of all communities to natural resources such as air, oceans and wildlife as well as to social creations such as libraries, public spaces, technology and scientific research.

<u>Advanced Design Studios</u>
ARCH 7010 Design Studio V
Ferda Kolatan, staff
The fall Advanced Design Studio focuses on the dynamic transformations shaping the 21st-century city. These transformations are multi-faceted, deep-rooted, and impact all aspects of contemporary urban life. Studio topics encompass a wide range of themes, including technological innovations, sociopolitical and environmental challenges, and cultural and historical shifts that typify architecture in the urban realm today. All studios travel to domestic and international cities to engage local stakeholders and conduct research on site.

ARCH7040 Design Studio VI
Ferda Kolatan, staff

The sixth and final Design Studios offer an in-depth examination and exploration of relevant architectural subjects through critical conceptual thinking, rigorous research, and advanced design and representational methodologies. As the final studios in the M. Arch sequence, these studios lead inquiries into topical subjects and prepare students for lifelong engagement in the field. Studios are taught by leading practitioners in the field, who share their expertise with the students and equip them with the necessary tools to participate in the discipline at the highest level. All studios include travel to domestic and international destinations.

Self-Assessment

Direct Assessment

Under the leadership of Andrew Saunders, who is the Associate Chair and Director of the Graduate Program and who performed Acting Chair duties in fall of 2023, a series of working sessions have occurred. A series of smaller meetings were held throughout the fall of 2023 with members of the Weitzman Student Council (STUCO) that culminated with a Town Hall on Friday November 10, 2023. The event was described by students as a “gathering of utmost importance, as it provides a platform for students to express their concerns, share their perspectives, and connect with department leadership”. The town hall also introduced the greater Weitzman community to a new student group known as the Wellness Working Group (WWG). In addition to an open forum, the event featured a questionnaire that was answered by over 100 participants in real-time, providing immediate results to a series of questions understood to be topical to graduate students.

The Town Hall led to a series of short- and longer-term implementations being undertaken by the department.

Immediate Actions:

1. To promote wellness, refrigerators and microwaves installed in studio spaces.
2. To facilitate better maintenance of department 3D printers, each machine has been tagged with QR codes for immediate repair and response time from Mike Avery and studio tech reps. Monthly meetings are set up to communicate with studio tech reps, IT and Mike Avery. A Fablab survey has been taken and 80% of students prefer the department to subsidize individual 3D printers rather than maintaining a public department 3D printer farm.
3. To demonstrate better coordination between core courses, a master schedule was developed by Phil Ryan (see attached) that charts major deadlines in all courses and has been coordinated with all core faculty in the first and second year before the beginning of the semester. The schedule is to be posted in all core studios and distributed digitally.
4. To facilitate more interaction between advisors and students, three events were supported by the department in the fall semester: With third year students/advisors a PechaKucha presentation of books that shape advisors’ discourses. With second year students/advisors a portfolio review session was organized. With first year students/advisors a ”meet and great” happy hour was organized.
5. To define expectations between students and faculty a meeting was organized to introduce the AIAS study and former AIAS president and author Sarah Curry (current Weitzman City Planning Student) and findings on studio culture – renamed “Learning & Teaching of Architecture Students”. The AIAS documents were circulated at the faculty meetings for discussion.

Ongoing Actions:

1. Revisit Advising Policy regarding training, support and restructuring.
2. Establish a studio culture document between faculty and students. The faculty adopted a studio culture policy in 2009 that was modified and presented in our 2016 NAAB APR. The document is currently being enhanced.

3. Post additional cost incurred by students for the MArch curriculum. Needed for compliance with Title IV and Accreditation (listed on website). Discussion of Adobe software was prevalent in the Town Hall survey.
4. Faculty curriculum review of expectations of student work outside of course time per hour/CU. Understanding of finite time available to students within a time management schedule that considers wellness and 10-hour work (max allowed for TA / RA).
5. Possible retreat to be planned for department to allow more focused discussion.

Departmental Surveys
In Fall 2023, the department undertook a comprehensive effort to engage all Master of Architecture alumni with a survey sent to better understand alumni experiences both while matriculating at Penn and within the architectural profession, with opportunities for alumni who have chosen alternative career paths to articulate those as well. Specific questions regarding the appropriateness of course content to alumni work, use of new technologies, and general preparedness for the architectural profession were put forth. The department has received a total of 433 survey responses of the total number of alumni who were contacted. Results will be discussed within various Weitzman Architecture working groups, including standing faculty, studio coordinators, and the Technology and History and Theory Committees.

School-Wide Surveys
Related to the cost of model-making supplies and fabrication, a survey was conducted to assess the general state of fabrication services at Penn, encompassing the specialized labs including the robotic arms in the Robotic and Autonomous Systems (RAS) laboratory on the first floor of Meyerson Hall, and the Venture Labs located in Tangen Hall which house works tables, hand and powers tools, sewing machines, 3D Printers, Laster Cutters, CNC mills, and spray booths and are available to all Penn students. The fourth floor of Meyerson Hall is home to the school's fabrication laboratory, a school-run fabrication space utilized by the Weitzman community. The survey was initiated at the time of a change in leadership in the "fablab" with results being reviewed in the spring of 2024.

Additionally, exit surveys are conducted with all graduating Weitzman students. These surveys are organized through the Office of Career Services, with results being shared with the leadership of each Weitzman department.

Enhancement to Courses since the Last Review
The changes outlined above have been initiated following several key events. The pandemic of 2020-2022 challenged teaching methods that were previously in-person and direct. While Weitzman Architecture has returned to in-person teaching, these environmental variables overlapped with recommendations being put forth by AIAS, as well as general and ongoing assessment by Weitzman Architecture as described above.

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.

Program Response:
Curricular Activities
Beginning in the 2020-2021 academic year a central goal of the second-year design studios (ARCH 6010 and 6020) is the design of solutions to address equity, inclusion, and justice, specifically within the discipline of architectural design. In the Urban Housing Design Studio (ARCH 6010) each studio section includes the design of Public Common Space, which is studied in a week-long exercise that is coordinated with plan, section, and façade

development. Public Commons is a term used for shared, equitable access to resources such as air, oceans, and wildlife as well as to social infrastructures such as libraries, civic programs, and open spaces that relate directly to the impact and success of dense housing in the city. Public Common Space for the architecture studios is launched as a catalyst to study the confluences of equity and inclusion through thoughtful inquiry. To allow points of view beyond the faculty, stakeholders from outside of the department and school are regularly engaged. An assessment goal of this outreach is ensuring each studio has access to outside stakeholders. The number of Urban Housing studios engaging dedicated stakeholders in Fall 2023 is 60%, with the goal of all studios having such outreach by fall 2025.

Core Design Studios play a central role in defining Weitzman Architecture's broader relationship to social equity and inclusion and create opportunities for student engagement with an array of sociocultural contexts and community-based clients.

ARCH 6010 Design Studio III
Hina Jamelle, staff
The third Core studio proposes the design of a 50,000 square foot, urban sited building that positions a new urban housing project with an existing structure. Students engage architecture in its role as a cultural agent and examine the way buildings establish and organize dynamic relationships between site, program and building materials. Urban access, relationship to siting, mass-transit, and the larger city will be considered. The curricular goals of the studio include the exploration of building massing, housing unit scale and variation, and the creation of hybrid forms of housing/dwelling as they relate to adaptive reuse and public programs within the urban environment.

ARCH 6020 Design Studio IV
Nathan Hume, staff
The fourth core studio aims to develop students' understanding of building design through the coordination, negotiation, and feedback of multiple constituents and consultants. The integration of site, structure, mechanical systems, envelope, and material are key to the development of the work. The organization of the semester works to give an understanding of how critical input from a host of expertise serves the design process. The students work alongside engineers, material specialists, and other consultants to gain new insight into building and construction constraints, processes, and opportunities. The projects, sited in urban contexts, are 35,000 square foot buildings which engage with the studio wide theme of the Public Commons - a term used for shared, equitable access of all communities to natural resources such as air, oceans and wildlife as well as to social creations such as libraries, public spaces, technology and scientific research.

Non-studio Courses
Each of the three (3) courses within the required History and Theory sequence ARCH5110 History and Theory I, ARCH5120 History and Theory II, and ARCH6110 History and Theory III have been expanded through a global sociocultural focus, with each course extending content and knowledge through diverse cultural inputs. These course expose historically and politically (and architecturally) determined patterns of marginalization and segregation and ask students to consider more sympathetic 21st century views on diversity, equity, and inclusion.

ARCH 5110 History and Theory I
Joan Ockman, Fernando Lara, Daniela Fabricius
This overview of the history of architecture from the mid-nineteenth century through World War II places modern architecture's evolution into global perspective, taking into account not just transformations in architectural aesthetics and building practices around the world but also the broader sociopolitical, economic, technological, environmental, and intellectual forces that influenced them. We consider changing modes of production and reception,

disciplinary and institutional innovations, animating debates, and global interdependencies and interchanges. Going well beyond iconic buildings and canonical “isms,” we pose the following questions: In what ways did the new architecture of the period respond to, participate in, and mediate the unprecedented experiences of modernizing societies? How did urban and environmental crises, colonial enterprises and devastating wars, national and international agendas, social changes, and technological advances affect architects’ understanding of the spaces they were called upon to design? How did tensions between modernizing forces and local or vernacular ways of building play out? How, in turn, did buildings and projects reflect different societies’ self-images and future aspirations? What can architecture’s manifestations over the course of this formative period tell us about the emergent modern world? In attempting to answer these questions, we take note of shifting historiographic paradigms and reflect on the genealogical relationship and relevance of this epoch to architectural thought and practice today.

ARCH 5120 History and Theory II
Joan Ockman, Fernando Lara
ARCH 5120 continues topics introduced in ARCH 5110. Beginning in the midst of World War II, it traces the evolution of architecture culture up to the twenty-first century against the background of an increasingly complex and interconnected world. We are concerned with both material and ideological changes and with key architectural protagonists, projects, and contexts, and the impact on them of external historical forces. Lectures move roughly chronologically through a varied array of issues, among them: postwar reconstruction and planning; the cultural dimensions of the Cold War; the rising critique of interwar modernism; the emergence of new technologies and postindustrial processes; the burgeoning of suburbanization, consumer culture, and mass media; neo-avant-garde approaches to form and space; the impact of new social and political movements; postmodernism; globalization and the advent of digital culture; and environmental, social, and geopolitical challenges at the turn of the century. As in the previous semester, the course is intended to provide students with broad knowledge of the architectural history of the period under study and an understanding of architecture’s role and agency in a changing global world.

ARCH 6110 History and Theory III
Fernando Lara, Daniela Fabricius, Vanessa Grossman
This course builds on the previous History/Theory sequence (ARCH 5110 and ARCH 5120), moving from an emphasis on history to focus on contemporary theories of architecture. The goal is to build literacy in contemporary architectural discourse as it relates to contemporary design culture. Students gain awareness of where the field of architectural theory currently stands, especially in terms of societal and technological developments. Lectures and discussions look at the aesthetic, political, and ethical implications of design, and consider the global context of architecture in light of climate change and emerging building and design technologies. Students gain skills in reading and discussing theoretical texts and learn how to better articulate their own critical thinking and positioning in the field.

Elective Courses
In addition to the core studios, a variety of elective courses explore the potential of spatial, architectural, and urban interventions to engage environments of inclusivity and equity.

ARCH 7120 Spatial Justice Collective: Study and Praxis in Philadelphia - A Collaboration with the Philly Peace Park
Rashida Ng, Eduardo Rega Calvo
Through a critical spatial lens, this course will advance discourse in social justice activism as it informs transformative design practices. Addressing various themes of study around forms of institutional violence and liberatory activism, we will engage in intersectional study of geography, sociology, urban planning, and the arts. We will examine topics such as anti-racism; decoloniality and land; civil resistance; housing justice; indigenous practices;

solidarity economics; critical ecology and climate justice; food sovereignty; and healing justice. The course is conceived in solidarity and collaboration with the Philly Peace Park and the Peacetown Community Land Trust and is structured in relation to their organizing principles as an open and community-operated campus. Weekly sessions will include public events, discussions of relevant theory, and the fabrication of a designed artifact to be installed at the park. These collective endeavors will deepen our understanding of the complexities of systems of oppression while actively contributing to the development of radical spatial justice discourse.

Non-Curricular Activities

The DEI Committee
The Architecture Department's DEI Committee, composed of six members of the department's faculty, has instigated the following initiative over the past few years:

Inclusion of the following DEI statement in course syllabi (adopted by most studios):
Equality, Inclusion, Diversity
The Civil Rights Act of 1964 disallowed discrimination based on race, gender, sexual orientation, religion, or nationality. The work of civil rights is ongoing, and this course participates in its code of equality, acceptance, and inclusion. The instructor and students will adhere to this code and will be held accountable to provide a space safe from oppression for students and instructors, based on the aforementioned traits. Any form of discrimination, by in-person meeting, online instruction, email, or social media communication is included in this policy. As a necessary step in the path towards diversity, equality, and inclusion in architecture education, the course acknowledges architecture's historical and current complicity with the systems of corporate, colonial and state domination. Architecture is, and has been, instrumental in various forms of systemic violence against the environment and people based on race, class, and gender. Evidence of the discipline's role in advancing asymmetries of power and inequity in the world include architectures of detention and punishment, of dispossession and displacement, of spatial segregation and cultural erasure, and of resource extraction, among others. Should an incident of discrimination occur, whether by explicit act or micro-aggression, the student or instructor should report it to Penn's Diversity and the Bias Incident Reporting Form found here https://diversity.upenn.edu/diversity-at-penn/bias-motivated-incident-report.

Restructuring TA hiring practices:
The DEI Committee responded to student requests for greater transparency in the hiring of student teaching assistants. All interested applicants now apply through the same open application method. Each instructor receives a folder of interested applicants and is asked to review and interview.

Sachs Program for Arts Innovation Grant:
Vanessa Keith is the artist in residency for the Sachs Program grant awarded to the school, which was the largest grant available. This is a dual application with the DEI committee from the School of Engineering. The project involves Weitzman students and Engineering students teaming up with junior-year high school students from local high school George Washington High. The work is an AR / VR project based on Afrofuturist narratives for a world undergoing climate change. See the following for further details: https://sachsarts.org/grant-awards/envisioning-climate-afrofuturist-chronicles-a-residency-with-vanessa-keith/.

Outreach and Scouting
The committee has worked with the Thurgood Marshall College Fund (TMCF) in presenting architecture as a profession to juniors at Historically Black Colleges and Universities (HBCU). Committee members have also presented Weitzman Architecture to undergraduate programs

such as those at Texas A&M and Morgan State University, as well as taking part in UPenn's Rising Scholars summer program where portfolio workshops are taught to local high schools.

The Weitzman School and the architecture department support multiple student-led groups and initiatives that explore diverse perspectives and sociocultural equity. More information and a complete list of student groups at Weitzman Architecture can be found in section 1.

NOMAS
Weitzman has a student chapter of the National Organization of Minority Architecture Students (NOMAS). The aim of this chapter is to create a space for minority students which will foster communication and fellowship, a place in which students can advocate for themselves and for change in the profession. Weitzman strives to offer students opportunities to create and maintain relationships within the wider professional community through networking events, portfolio reviews and more. The School has participated in the National Organization of Minority Architects (NOMA) annual EXPO, most recently held in October 2023 in Portland, Oregon.

Weitzman Student Council (StuCo)
The Weitzman School Student Council (StuCo) is responsible for championing the interests of all academic disciplines by facilitating connections between students within the school, across the university, and with Philadelphia and the design community at large. In addition to having program-specific events dedicated to social, service, academic, or student group initiatives, StuCo works to shape the Weitzman School into a healthy, integrated collective of artists, designers, planners, and scholars-in-training who share a perspective that looks beyond disciplinary labels in an environment that is stimulating for students and faculty. StuCo hosts Friday afternoon Happy Hours, a student-lead tradition since 1967.

The Wellness Working Group (WWG)
The Wellness Working Group (WWG) is a student-run, centralized channel through which Weitzman architecture students can collect and discuss concerns about their mental and physical wellness, as well as brainstorm pathways to address these concerns. The group aims to bring collective student concerns and suggested pathways for improved wellness before the department chair, standing faculty, and affiliated faculty. Members work with the department chair to determine the best type of forum for each topic. This group facilitates strong department-student communication and collaboration. Currently, the WWG represents the wellness concerns and suggestions of architecture master's students, with the eventual goal of representing the wellness concerns of all architecture across Weitzman. Student input is solicited from student surveys, focus groups, and one-on-one discussions.

University Resources
Penn has a number of policies and initiatives that support its efforts to foster inclusive excellence. Diversity and inclusion related data, progress reports on initiatives, a timeline of selected milestones, and stories about members of the Penn community are disseminated through various channels including the university and school websites. Additionally, the University has established expectations for members of the University community to support the University's commitment to inclusive excellence. These policies appear in policy manuals, handbooks, websites, and other campus publications.

Penn has specifically vowed to support our community in times of crisis following events in the fall of 2023 and has created numerous physical and virtual interfaces for students, faculty, and other members of the Penn community.

Self-Assessment
Direct Assessment

Student understanding of sociocultural inclusion and equity in the built environment is assessed primarily by individual instructors and guest stakeholders in the context of discussions and reviews. Since 2021, the second-year studio faculty hold a *Public Commons Fair* each November where students create a graphic presentation of their work in the school's upper gallery. In addition to public presentations done by faculty regarding individual studios and students with respect to individual project intent, design content is also shared with outside stakeholders, many from the communities where each project is sited. The studio faculty work with an "Assessment and Outcomes" document that tracks student progress across various deliverables and through the semester. Each deliverable date is expected to build on previous deliverables, reinforcing both shared values and learning objectives through the semester. For instance, the stated learning objectives of the studio that are reinforced in the Public Commons presentation are:

- Develop hybrid forms of housing/dwelling to include the development of a new Public Common Space.
- Explore building massing and volume, and the physical impact it makes on the city through a detailed façade.

These are combined with the Student Criteria Condition 5 (SC.5) of Site Conditions.

Each of these, and other learning objectives and student criteria, are revisited at other points during the semester, including the midterm and final review.

Indirect Assessment
History and Theory faculty participate in the Urban Housing presentations at the students' mid-term and final review. These public forums foster further discussion on a student's approach to the design of housing and its historical and theoretical underpinning as it relates to equity and social justice. There is a concerted effort to distribute faculty across the curriculum so that faculty and student populations in every Weitzman course represent the diversity of our backgrounds and perspectives.

Enhancement to courses since the last review
Weitzman Architecture, as evidenced by recent hires, has extended a wider net in faculty searches and staffing positions to create an even wider pool of candidates who ultimately increase our broadened outlook and has represented n of housing and its historical and theoretical underpinning as it relates to equity and social justice.

3.2 Student Criteria (SC): Student Learning Objectives and Outcomes

A program must demonstrate how it addresses the following criteria through program curricula and other experiences, with an emphasis on the articulation of learning objectives and assessment.

SC.1 Health, Safety and Welfare in the Built Environment—How the program ensures that students understand the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities.

Program Response:
As a professional design school, Weitzman Architecture at Penn regularly assesses the relationship of required courses to one another and as they relate to requirements of the profession. In many instances, studio and non-studio courses have the opportunity to reinforce professional learning objectives at multiple times throughout the semester as well as between courses at various points within a student's trajectory in the program.

Issues of health, safety, and welfare as they relate to architectural design and codes and standards are generally engaged in the design studios and are specifically addressed at five (5) points within the curriculum, occurring in the first, second, and fourth semesters of study.

Design work is supported in these instances through coursework that familiarizes our students with construction systems, techniques, and technologies in ARCH5310 Construction I and ARCH 5320 Construction II, as well as in coursework on the analysis and design of building structural systems in ARCH5350 Structures I and ARCH5360 Structures II. In the fourth semester, ARCH6340 Environmental Systems II introduces students to codes and standards surrounding fresh air requirements and building conditioning.

Courses and Materials in Evidence:
- ARCH5310 Construction I
- ARCH5320 Construction II
- ARCH5350 Structures I
- ARCH5360 Structures II
- ARCH6340 Environmental Systems II

Self-Assessment
Direct Assessment
Weitzman Architecture maintains a Technology Committee that includes all faculty that teach core courses within the technology curriculum. These include the structures, construction, and environmental systems courses. The committee is charged by the chair to assess, based on coursework, student evaluations, and other metrics to assess outcomes in each course.

Indirect Assessment
Guest speakers and consultants regularly participate in required core courses providing feedback on student work from outside of Weitzman.

SC.2 Professional Practice—How the program ensures that students understand professional ethics, the regulatory requirements, the fundamental business processes relevant to architecture practice in the United States, and the forces influencing change in these subjects.

Program Response:
At Weitzman Architecture, the M. Arch program has multiple inputs within the curriculum for students to ascertain the regulatory, professional, and ethical frameworks within architectural practice. Students initially understand these through the design studios, many of which introduce constraints which are of a regulatory nature, including zoning or building code compliance. In the fourth semester of study, students enroll in a two-semester Professional Practice sequence, which further elaborates the role of the architect in a broad sense.

Courses and Materials in Evidence:
- ARCH6710 Professional Practice I
- ARCH7710 Professional Practice II

Self-Assessment
Direct Assessment
In addition to the courses of the same name, “professional practice” is intrinsic to all facets of the Master of Architecture program. Accordingly, direct assessment occurs at many moments in the teaching process and within many courses. For the first two years of the core studios, the process of design and documentation is carefully organized around key waypoints that facilitate engagement with outside professionals and clients as well as focused internal reviews that are documented using written assessment by instructors. These waypoints are planned around key practice issues centered either on the theme of the studio or a critical element of the building project (site, accessibility, egress, constructability, community engagement). All students are also supported by faculty and staff that participate in workshops to aid the students in strategies for networking, portfolio and resume preparation, as well as assessing the marketplace for the right professional pursuit. Student portfolios,

generated predominantly from studio work, are the focus of these engagement sessions. This occurs in studio courses as well as in the Professional Practice course sequence.

Indirect Assessment
The department hosts a series of events, workshops, and career fairs that provide students with networking opportunities as well as structured feedback from faculty, professionals, and invited experts. The School of Design created the position of Associate Director for Professional Development and Leadership in 2017 to work closely with the faculty and students when promoting job opportunities and sessions designed to engage the students in the development of their networking and professional tools. An all-school career lecture, held during non-course time, is hosted in the late fall annually to introduce students to NCARB, the Architectural Experience Program (AXP) process, the Architect Registration Exam (ARE), and the nuanced steps in finding employment. A week before the lecture is held, the students are invited to an online survey regarding the student's registration progress as well as to give them the opportunity to submit specific questions. An open question and answer session is held during the lecture, and all submitted questions are answered for the benefit of the gathered group. The lecture/Q&A is recorded and distributed to students unable to participate. Within the Professional Practice Courses, students are given numerous surveys and dynamic engagement tools to not only facilitate input, but to also enable students to learn different ways of thinking, working, and learning. In addition to course content, the course invites professionals from myriad career paths affiliated with the discipline of architecture and construction to record a series of short online videos answering questions about their career path or industry. It has also created a robust, multi-year, online library of professionals telling stories that future students can benefit from as they consider their professional path.

SC.3 Regulatory Context—How the program ensures 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.

Program Response:
Students learn the process of analyzing land use requirements, composing drawing sets for municipal review and understand the relationship of building codes and local zoning ordinances in the formation of their work. Courses engaging regulatory context include Construction II, Structures II, ARCH 6310 D^3 Details, Data and Delivery, and ARCH 6020 the comprehensive design studio. In the lecture courses, students engage in advanced research methods and forensic analysis of artifacts and primary source documents associated with the material detailing, fabrication, data-scaping, virtualizing, simulating, and workflow planning of building project. In structures, the influence of model codes on the selection of a structural system, as well as accepted standards for steel, timber, and reinforced concrete design are presented, as well as the impact of natural hazards, including seismic, wind, and floods, and consequences of fire-safety on structures are considered.

Courses and Materials in Evidence

Courses and Materials in Evidence:
- ARCH 5320 Construction II
- ARCH 5360 Structures II
- ARCH 6310 D3: Details, Data, and Delivery
- ARCH 6020 Design Studio IV

Self-Assessment
Direct Assessment
Student knowledge of codes, regulations, and industry standards is assessed in both seminar and studio courses. In D^3 Details, Data and Delivery a semester project in which students

study a precedent building, contacting the design and contracting team, is submitted at the conclusion of the semester. In Weitzman Architecture's Comprehensive Design Studio (ARCH6020) students create an integrated drawing set that addresses a basic level of structural and mechanical, electrical, and plumbing integration. The drawing set is evaluated and graded by each individual instructor, with joint-faculty reviews to ensure that the work of each studio section informs the other so that a general and high-level of work is achieved. This process also ensures that all NAAB conditions are met by Weitzman Architecture students.

In the event a student falls behind in this course work, a meeting is held with the student and Student Services office to create a path to ensure the student will succeed in their course endeavors. This assessment begins at the departmental level with the instructor, Chair, and Student Services and Academic Coordinator, and as required involves services at the broader school or university level.

Indirect Assessment
In each of the courses, and particularly the Comprehensive Design Studio, students learn from allied professionals, who work directly with them in the creation of their course deliverables. These guests include professional engineers working in robotics, as well as structural and environmental simulation. In addition, in the ARCH 6020 Design Studio, a series of Master Lectures by practicing engineers and material experts occur and are attended by all second-year students. In spring 2024, lecturers include Ray Clark, Executive Director of the Precast/Prestressed Concrete Institute (PCI), Lauren Magasko from TimberLab, and Nikita Jathan from Atelier Ten.

Enhancement to Courses since the Last Review:
Penn's course work relating to regulatory codes and context further emphasizes work with client groups and engineering consultants, students in the Comprehensive Design Studio IV enjoy direct contact with various stakeholders engaged in the development and construction of architectural projects.

SC.4 Technical Knowledge—How the program ensures that students understand the established and emerging systems, technologies, and assemblies of building construction, and the methods and criteria architects use to assess those technologies against the design, economics, and performance objectives of projects.

Program Response:
Technical knowledge related to the design and delivery of buildings, including the integration of building systems and various construction technologies, is abundant within the M. Arch curriculum. In the first year, students enroll in two-course sequences in Construction (ARCH 5310 and 5320) and Structures (ARCH 5350 and 5360), with ARCH 5320 focusing on the development of a drawing set for a small building using Building Information Modeling (BIM) tools. In the second year, students enroll in courses advancing technical knowledge including ARCH 6310 D^3 Details, Data and Delivery and ARCH 6360 Material Formations. These aspects of our curriculum are also supported by a three-sequence Visual Studies course in technical drawing and modeling (ARCH 5210, 5220, and 6210). M. Arch candidates also enroll in a two-course sequence in Environmental Systems (ARCH 6330 and 6340). Students are also required to take a minimum of one Tech-Designated Elective, which is usually selected in the third and final year, providing a comprehensive and distributed means of technical information in the program.

Courses and Materials in Evidence:
- ARCH 5210 Visual Studies I
- ARCH 5310 Construction I
- ARCH 5350 Structures I

- ARCH 5220 Visual Studies II
- ARCH 5320 Construction II
- ARCH 5360 Structures II
- ARCH 6210 Visual Studies III
- ARCH 6310 D^3 Details, Data and Delivery
- ARCH 6330 Environmental Systems I
- ARCH 6340 Environmental Systems II
- ARCH 6360 Material Formations

Self-Assessment

Direct Assessment

Students in the required core technical courses, including Structures, Construction, and Environmental Systems, are generally graded based on exams. Additionally, course work includes graded assignments and projects. In ARCH 5320 students complete an entire set of working drawings for a multi-story commercial building using Building Information Modeling. In the structures sequence, for instance, students will create digital models using 3D modeling software including Rhinocerous3D, and associated plug-ins to perform analysis for overall form-finding and to select structural components within a system.

The Technology Committee, charged by the Chair at the beginning of each academic year, coordinates the required courses through a master schedule so that student schedules, semester deliverables, and individual course content are orchestrated. The schedule is shared with students in each of the 3-year course of study, and beginning in Spring 2024, the schedule is available both within shared online content as well as posted in physical locations around Meyerson Hall.

In the event a student falls behind in this course work, a meeting is held with the student and Student Services office to create a path to ensure the student will succeed in their course endeavors. This assessment begins at the departmental level with the instructor, Chair, and Student Services and Academic Coordinator, and as required involves services at the broader school or university level.

Indirect Assessment

Rigorous coordination among these courses and their instructors addresses that NAAB requirements are met and reiterated across these technical topics. Each of these courses have some relationship to the design studios ranging from technical graphics in the early core, to organized sessions in the later core pertaining to building structures and services integration. In many instances, the substrate of knowledge imparted through these required core technical courses allow students to advance building technology through design research in a variety of Tech-Designated Electives, which are included in degree requirements and generally taken in the third year. Additionally, the courses, and their alignment with the studios allow for innovation in design studio work, especially in the housing and comprehensive studios (ARCH 6010 and 6020). In some instances, students continue these studies as research assistants in the various labs headed by faculty teaching the core technical courses.

Enhancement to Courses since the Last Review

The hiring of new faculty tenure-track faculty, including Masoud Akbarzadeh, Dorit Aviv, Laia Mogas-Soldevila, and Robert Stuart-Smith, each heading a laboratory engaging research in building systems and teaching in the core technical sequence. Technical Committee Chair, Franca Trubiano has focused the third construction course, ARCH 6310 D^3 Details, Data and Delivery, to engage more global issues affecting the profession including supply chain and material sustainability, while introducing equity, diversity, and inclusion aspects on the broader construction industry.

SC.5 Design Synthesis—How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating synthesis of user requirements, regulatory requirements, site conditions, and accessible design, and consideration of the measurable environmental impacts of their design decisions.

Program Response:
Design Synthesis at Weitzman Architecture is largely achieved within Design Studios II, III, and IV, and supported through specific coursework in the two-sequence Professional Practice curriculum. While the fourth-semester Comprehensive Design Studio (ARCH 6020) takes on the majority of this content, specific requirements relating to parking and building accessibility and egress have been introduced in ARCH 5020 and ARCH 6010, the second and third studios respectively. ARCH 6010, the Urban Housing Studio, introduces students to ADA and accessibility requirements, as well as building egress systems. This work is reassessed via specific exercises in the professional practice sequence.

Courses and Materials in Evidence:

- ARCH 5020 Design Studio II
- ARCH 6010 Design Studio III
- ARCH 6020 Design Studio IV
- ARCH 671 Professional Practice I
- ARCH 771 Professional Practice II

Self-Assessment
Direct Assessment
In each of the studios, as well as the Professional Practice courses, an *Assessment and Outcomes* document is utilized by faculty teaching in each section. The assessment document coordinates a schedule established and coordinated at the start of each semester with a series of learning objectives that align with both Penn and NAAB Shared Values (see section 2), as well as specific tasks put forth in SC.5 Design Synthesis and SC.6 Building Integration. In the design studios, students are graded at the midterm and final reviews, as well as in discreet exercises coordinated within each studio. This includes the Public Commons presentation, which generally follows the midterm review in the Urban Housing Studio and challenges students to imagine linkages between their housing proposals and more public context and programs. The work introduced in the studios is reassessed in the Professional Practice sequence via specific course assignments, including the creation of an egress diagram based on a plan the student designed in the housing studio in a prior semester. in each of these courses, an *Assessment and Outcomes* document is utilized by faculty teaching in each section. The assessment document coordinates a schedule established and coordinated at the start of each semester with a series of learning objectives that align with both Penn and NAAB Shared Values (see section 2), as well as specific tasks put forth in SC.5 Design Synthesis and SC.6 Building Integration.

Indirect Assessment
All design studios at Penn enjoy the participation of outside stakeholders, professionals, and critics who join the studio as guests during the midterm and final review. In addition, and specifically in the Urban Design Studio, a group of alumni-practitioners are invited back to campus for an afternoon. Each of the alumni-practitioners are placed in a studio and perform a “red-line” session with each student. The session occurs 2-3 weeks before the final review and allows each student to collect a recorded mark-up of their progress drawings, ensuring in this case, that goals pertaining to SC.5 Design Synthesis are met.

Enhancement to Courses since the Last Review
Modifications to the curriculum pertaining to Design Synthesis are largely informed by the data-collection and assessment imperatives introduced by NAAB in 2020. The Assessment and Outcomes document has been adopted by all courses that evaluates a student’s ability

to execute design work that meets these requirements. This shift to assessment and continual improvement has also fostered better curricular collaboration across the faculty and allowed Weitzman Architecture to positively take stock at a time of leadership transition.

SC.6 Building Integration—How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance.

Program Response:
Building Integration at Weitzman Architecture is largely achieved within the core Construction Technology II (ARCH 5320) course in the spring of the first year, and in Design Studio IV in the spring of the second year, The fourth-semester Comprehensive Design Studio (ARCH 6020) takes on the majority of this content, specific requirements relating to the production of a drawing set using Building Information Modeling (BIM) tools.

Courses and Materials in Evidence:

- ARCH 5320 Construction Technology II
- ARCH 6020 Design Studio IV

Self-Assessment
Direct Assessment
In ARCH 5320 Construction II a 15-18 sheet set of building drawings is completed by all students as part of the BIM portion of the course. This assessment indicates that all M. Arch students have been introduced to the modeling and documentation of structures, skins and systems. Weitzman Architecture prides itself as one of the most advanced and integrated BIM curriculums in the country given that all students without exception can waive out of ARCH 5320 without having to take a BIM exam. Following Construction I, in each of the studios, as well as the Professional Practice courses, an *Assessment and Outcomes* document is utilized by faculty teaching in each section. The assessment document coordinates a schedule established and coordinated at the start of each semester with a series of learning objectives that align with both Penn and NAAB Shared Values (see section 2), as well as specific tasks put forth in SC.5 Design Synthesis and SC.6 Building Integration. In the design studios, students are graded at the midterm and final reviews, as well as in discreet exercises coordinated within each studio.

Indirect Assessment
All design studios at Penn enjoy the participation of outside stakeholders, professionals, and critics who join the studio as guests during the midterm and final review. In addition, and specifically in the Urban Design Studio, a group of alumni-practitioners are invited back to campus for an afternoon. Each of the alumni-practitioners are placed in a studio and perform a “red-line” session with each student. The session occurs 2-3 weeks before the final review and allows each student to collect a recorded mark-up of their progress drawings, ensuring in this case, that goals pertaining to SC.5 Design Synthesis are met.

Enhancement to Courses since the Last Review
Modifications to the curriculum pertaining to Design Synthesis are largely informed by the data-collection and assessment imperatives introduced by NAAB in 2020. The Assessment and Outcomes document has been adopted by all courses that evaluates a student’s ability to execute design work that meets these requirements. This shift to assessment and continual improvement has also fostered better curricular collaboration across the faculty and allowed Weitzman Architecture to positively take stock at a time of leadership transition.

4—Curricular Framework

This condition addresses the institution's regional accreditation and the program's degree nomenclature, credit-hour and curricular requirements, and the process used to evaluate student preparatory work.

4.1 Institutional Accreditation

The APR must include a copy of the most recent letter from the regional accrediting commission/agency regarding the institution's term of accreditation.

Program Response:

The University of Pennsylvania is accredited by *the Middle States Commission on Higher Education.* The University has been accredited since 1921 and has been evaluated for accreditation every 8-10 years. The University was first granted accreditation in 1921, and our most recent on-site evaluation and last reaffirmation was in 2014. Penn is currently undergoing re-accreditation via a self-study evaluation. The Commission accredits institutions of higher education in Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania and other locations along the eastern seaboard as well as locations abroad.

NAAB

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STATEMENT OF ACCREDITATION STATUS

The Statement of Accreditation Status (SAS) is the official statement of the Middle States Commission on Higher Education (MSCHE) about each institution's current accreditation status and scope of accreditation. The SAS also provides a brief history of the actions taken by the Commission.

Institution:	**UNIVERSITY OF PENNSYLVANIA** Philadelphia, PA
Address:	1 College Hall, Room 100 Philadelphia, PA 19104-6380
Phone:	(215) 898-5000
URL:	**www.upenn.edu**
Accreditation Liaison Officer (ALO):	Ms. Joann Mitchell
Commission Staff Liaison:	Dr. Judith Sciple, Vice President

Accreditation Summary

For more information, see the Commission's **Accreditation Actions Policy and Procedures**.

Phase: Accredited

Status: Accreditation Reaffirmed

Accreditation Granted: 1921

Last Reaffirmation: 2014

Next Self-Study Evaluation: 2023-2024

Please refer to: https://www.msche.org/institution/0567/ for further information.

4.2 Professional Degrees and Curriculum

The NAAB accredits professional degree programs with the following titles: the Bachelor of Architecture (B. Arch.), the Master of Architecture (M. Arch.), and the Doctor of Architecture (D. Arch.). The curricular requirements for awarding these degrees must include professional studies, general studies, and optional studies.

4.2.1 Professional Studies. Courses with architectural content required of all students in the NAAB-accredited program are the core of a professional degree program that leads to licensure. Knowledge from these courses is used to satisfy Condition 3—Program and Student Criteria. The degree program has the flexibility to add additional professional studies courses to address its mission or institutional context. In its documentation, the program must clearly indicate which professional courses are required for all students.

Programs must include a link to the documentation that contains professional courses are required for all students.

Program Response:

Professional Studies courses at the Weitzman Architecture can be sorted in five general tracks: design studio, history and theory, technology, visual studies, and professional practice. A public listing of the required courses to complete the M. Arch at Penn can be found here: https://www.design.upenn.edu/master-architecture-professional-degree.

Design Studio

Daniel Markiewicz, Annete Fierro, Hina Jamelle, Nate Hume, Ferda Kolatan

Core design studios encompass a four-semester sequence within the M. Arch program. In *Design Studio I*, students are introduced to foundational topics of component order and assembly through examination of part-to-whole relationships with digital design techniques, tectonic and material studies and physical fabrication. Environmental and urban analysis, siting and programming of a medium scale building, and cultural dimensions of public space, are stressed in *Design Studio II*. Large scale site and ground plans, emphasizing entry and access, are stressed in the development of the project. The curricular goals of *Design Studio III,* Weitzman Architecture's Urban Housing Studio, include the exploration of building massing, housing unit scale and variation, and the creation of hybrid forms of housing/dwelling as they relate to adaptive reuse and public programs within the urban environment, incorporating life safety requirements. *Design Studio IV* aims to develop students' understanding of building design through the coordination, negotiation, and feedback of multiple constituents and consultants. The integration of site, structure, mechanical systems, envelope, and material are key to the development of the work. In their final year of study, students enroll in advanced research studios, each with a travel component, (*Design Studio V and VI*) and may elect to pursue an independent thesis in their last semester.

Required Courses

- ARCH 5000, Summer Preparatory Design Studio (required only for incoming students without an architecture background, non-credit course)
- ARCH 5010, Design Studio I
- ARCH 5020, Design Studio II
- ARCH 6010, Design Studio III
- ARCH 6020, Design Studio IV
- ARCH 7010, Design Studio V
- ARCH 7040, Design Studio VI

History and Theory

Joan Ockman, Fernando Lara, Daniela Fabricius, Vanessa Grossman

This curricular area exposes M. Arch students to the history and theory of architecture through courses in which in-depth study of design projects, built environments, and written texts leads to the comprehension of fundamental architectural concepts, methods, and issues, providing an intellectual context for understanding past and present buildings and physical environments in relation to larger conceptual paradigms and discursive frameworks.

In the summer prior to matriculating students lacking a previous background in architectural history take a course that provides a global overview of architecture from earliest times to the nineteenth century. Upon entry they enroll in the first year in a required two-semester sequence traversing the history of architecture from 1850 to the present (ARCH 5110, 5120). This is followed by a required course in architecture theory (ARCH 6101) in fall semester of the second year that includes the study of indigenous, vernacular, and non-Western architecture and urbanism. Upon completing this three-semester sequence students are offered an array of elective courses from which to choose. Electives in architectural history and theory vary from year to year but starting in 2023–24 they are being reviewed by the History and Theory Committee to reflect overall program objectives and balance diverse interests.

Required Courses

- ARCH 7930, Summer Institute: History of Architecture (required only for incoming students without a background in architecture history, non-credit course)
- ARCH 5110, History of Architecture from 1850 to World War II in Global Perspective
- ARCH 5120, History of Architecture from World War II to the Present in Global Perspective
- ARCH 6110, Problems in Contemporary Architecture Theory

Technology

Franca Trubiano, Philip Ryan, Richard Farley, Dorit Aviv, Robert Stuart-Smith, Masoud Akbarzadeh, Eric Teitelbaum

The required core Technology sequence in the Master of Architecture program at the Weitzman School of Design consists of both foundational and advanced courses in construction, structures, environmental systems, robotics, and project delivery. The sequence is exemplary for making available to all M. Arch students the technical knowledge, information, and research skill sets required of the design professional in the twenty-first century. Material innovations, information modeling, structural form finding, environmental simulations, robotic fabrication, and peer reviewed research on project delivery are all subjects to which students are exposed.

Construction Technology I and II, is a two-course sequence that prepares students to understand the material, tectonic, and building centered processes necessary when constructing the built environment. ARCH 5310 Construction TECHNOLOGY II (.5 CU) introduces the relationship of design and construction in the creation of buildings, where students learn to build a masonry and light wood frame building from the ground up, examining the fundamental material and construction concepts related to construction starting with excavation and ending with interior finishes. ARCH 5320 Construction TECHNOLOGY II (1 CU) is focused on multi-story, light and heavy steel frame and concrete construction, envelope cladding systems, and the integration of building systems. Students work with teaching assistants in the completion of a virtual model using Building Information Modeling, creating a set of construction drawings, reviewed, and evaluated using industry typical red-lining techniques. Site visits are also an essential part of both courses.

Structures I and II (ARCH 5350 and ARCH 5360) (.5 CU each) are lecture courses that prepare all students to understand the role of structural designs in architecture, and that

teach the impact of bending, shear, and deflection on building forms. Students are introduced to load simulations and digital form finding for minimal material use making them exceptionally prepared for sustainable and low embodied carbon design, within the limits of Health, Safety and Welfare.

Environmental Systems I and II (ARCH 6210 and 6220) (.5 CU each) prepare all students to understand the role of lighting and heat energy in the environmental design of buildings. Students are also introduced to environmental simulations (light and heat) and building sensor technology in early building design making them exceptionally prepared to participate on energy design teams which acknowledge the climate crisis.

Material Formations (ARCH 6360) (.5 CU) prepares all students to engage generative design, material physics simulation, and hand-on with robotics fabrication, through their access of the ARI lab making them exceptionally prepared to lead innovations in the building industry that leverage automated and robotic construction.

D^3 Details, Data, and Delivery (ARCH 6310) (.5 CU) is focused on advanced subjects in the project delivery of buildings, inclusive of Biogenic and Carbon Responsive Materials and Details, Environment, Resiliency, and Fossil Fuel Free Building Systems Integration, Advanced Fabrication, Robotic Manufacturing, and Building Labor, and Computational Workflows, Artificial Intelligence, and Simulating Building. Students engage in advanced research methods and forensic analysis of primary source documents associated with the material detailing, fabrication, data-scaping, virtualizing, simulating, and workflow planning of building projects. They interview members of the project delivery team.

Required Courses

- ARCH 7940, Summer Institute: Physics for Architects (required only for incoming students deficient in physics, non-credit course)
- ARCH 5310, Construction I
- ARCH 5320, Construction II
- ARCH 5350, Structures I
- ARCH 5360, Structures II
- ARCH 6310, D^3: Data, Design, Delivery
- ARCH 6330, Environmental Systems I
- ARCH 6340, Environmental Systems II
- ARCH 6360, Material Formations
- ARCH 6990, Technology Lab
- ARCH 7320/7360 Technology Designated Elective

Visual Studies
Nate Hume

The coursework of Visual Studies investigates architectural representation as the primary means for communication and development of an architect's work. Alongside the development of fundamental skills are weekly lectures on the history of representation exploring the introduction of new technologies, drawings relation to culture, and the impact on practice of representational turns. The first semester investigates documenting objects and space through orthographic projection and isometric drawing while also moving between virtual and physical space with means including photogrammetry and 3D printing. The second course in the Visual Studies sequence emphasizes drawings as generative devices which project possibilities rather than just documenting design decisions. Assignments explore image construction through photography and rendering and the construction of a large cutaway section drawing which speculates on the development of the studio project. The final course in the Visual Studies sequence integrates more dynamic modeling, texturing and rendering applications to synthesize and propel work from the earlier semesters. To

avoid tropes and the inherent biases of the tools, the courses serve to help comprehend not only the technical and aesthetic but also the theoretical and political implications of representation. The three-semester arc provides an understanding of contemporary drawing, modeling, and visualization techniques while also creating the necessary grounding in the historical context needed to position one's work. This allows the students to engage and critique larger discussions in the field as well as to shape and impact culture and the built environment.

Required Courses

- ARCH 7910, Summer Institute: Digiblast (required for all incoming students, non-credit course)
- ARCH 5210, Visual Studies I
- ARCH 5220, Visual Studies II
- ARCH 6210, Visual Studies III

Professional Practice
Phillip Ryan

The Professional Practice Sequence comprises two essential courses: ARCH 6710 in the spring of the second year and ARCH 7710 in the fall of the third year. These courses integrate the student's design, history and theory, and technical expertise into the regulatory, business, and cultural realms they will encounter in their professional journey. ARCH 6710 focuses on "the Project", taking the student through the terminology, processes, and priorities of the design, documentation, and construction process. ARCH 7710 is centered on "the Practice" and introduces the students to business organization and registration, firm organization, costs of doing business, and the ethical, regulatory, and contractual conditions that govern the discipline. ARCH771 is also supplemented by a robust engagement with related professionals who bring their stories and advice to moderated discussions with the class.

Required Courses

- ARCH 6710, Professional Practice I
- ARCH 7710, Professional Practice II

4.2.2 General Studies. An important component of architecture education, general studies provide basic knowledge and methodologies of the humanities, fine arts, mathematics, natural sciences, and social sciences. Programs must document how students earning an accredited degree achieve a broad, interdisciplinary understanding of human knowledge.

In most cases, the general studies requirement can be satisfied by the general education program of an institution’s baccalaureate degree. Graduate programs must describe and document the criteria and process used to evaluate applicants’ prior academic experience relative to this requirement. Programs accepting transfers from other institutions must document the criteria and process used to ensure that the general education requirement was covered at another institution.

Programs must state the minimum number of credits for general education required by their institution and the minimum number of credits for general education required by their institutional regional accreditor.

Program Response:
Architecture is a multidisciplinary field whose discourse is enriched by a diversity of knowledge, background, and experience. The program accepts applicants from a wide range of disciplines and cultural backgrounds across the arts, sciences, humanities, and engineering to build a student community of diverse foundations from which to approach the professional study of architecture. All students entering the program must hold a bachelor’s

degree from an accredited college or university, or its equivalent, which endows them with the academic experience necessary to fulfill the general studies requirement. The admissions requirements through which the general studies credentials of applicants are evaluated are as follows:

Master of Architecture Prerequisites
To be admitted without condition to the three-year Master of Architecture program, an applicant is required to possess the following:

- The successful completion of not less than one college-level *physics* course; the completion of two college-level physics courses is recommended.
- The successful completion of not less than one college-level *calculus* course.
- A general knowledge of the *history of Western architecture* as demonstrated by the successful completion of not less than one college-level course.
- The successful completion of a minimum of two semesters of college-level *design studio* courses. One of these design studios should be an architecture studio.

Candidates admitted with deficiencies in any of these prerequisites must fulfill them before matriculation.

Digital workflows and fabrication preparation for all incoming students
All Master of Architecture students will take "DigiBlast: Fundamentals of 3D Modeling & Digital Output" in the summer before matriculation. These in-person workshops will lay the foundations for a range of computer skills that are essential for navigating the digital workflow of Weitzman School graduate studios. Three-dimensional and parametric modeling visualization and 3D post-production presentation techniques will be covered in daily hands-on tutorials and during in-class lab time with expert guidance. Students also gain familiarity with the school's digital fabrication facilities and receive safety training for the FabLab, the school's fabrication workshop Once acquired, the skills developed in DigiBlast will be used in explorations in future studios at Weitzman School

Summer Institute preparatory courses
Summer Preparatory Design Studio: The Summer Preparatory Studio offers an intensive drawing and design experience to candidates for admission to the Graduate Program in Architecture who have not completed the necessary design studio prerequisites or who are required to have additional design experience to qualify for matriculation into the Master of Architecture Professional Degree Program in September. This studio qualifies as a design studio prerequisite for the Master of Architecture degree. The intent of the drawing component of the course is to familiarize the student with primarily black and white mediums (pencil, charcoal, and ink). Exercises are designed to sharpen the student's ability to *see* selectively and to transform image to paper through both line and tonal renditions in freehand sketch form. Exercises will also familiarize the student with basic drafting skills necessary for architectural communication and introduce computer-aided design through intensive Rhinoceros3D and Adobe Illustrator tutorials provided in the course. The course presents a rhythm of basic three-dimensional design studies and simple architectural studio investigations. These are intended to build fundamental skills and acquaint the student with the architectural issues of form/space, conceptualization, transformation of scale, simple functional and constructional problems and a sensitivity to context.
History of Architecture: This is a non-credit course for entering Master of Architecture students. The course covers western architecture from ancient Egypt to the modern age and satisfies the history pre-requisite condition for matriculation in the fall.
Physics For Architects: This is a non-credit course for entering Master of Architecture students. The course covers the following: mechanics, heat, light, sound and electricity. The course will satisfy the physics pre-requisite condition for matriculation in the fall.

4.2.3 Optional Studies. All professional degree programs must provide sufficient flexibility in the curriculum to allow students to develop additional expertise, either by taking additional

courses offered in other academic units or departments, or by taking courses offered within the department offering the accredited program but outside the required professional studies curriculum. These courses may be configured in a variety of curricular structures, including elective offerings, concentrations, certificate programs, and minors.

The program must describe what options they provide to students to pursue optional studies both within and outside of the Department of Architecture.

Program Response:
As M. Arch students matriculate, they acquire more agency to shape their studies and specialization through optional studies to supplement the requirements of their professional education. Electives topics are broad ranging, encompassing design, history and theory, technology, and practice. By the completion of the program, students will have taken a minimum of six (6) elective courses, one of which must be a technology designated elective. Students also have access to a wide range of design electives offered by other Weitzman departments, as well as from the many graduate departments across the University of Pennsylvania and need not be design related. Students also have the option of completing design certificates as part of their studies. Certain dual-degree programs are also available.

Architecture Department Electives of the Fall 2023/ Spring 2024 cycle
Design Electives
ARCH 7220 (fall) Vibrant Artifacts
ARCH 7250 (fall) Design Thinking
ARCH 7280 (fall) Design of Contemporary Products: Design for Equity, Inclusion and Accessibility
ARCH 7390 (fall) New Approaches to an Architecture of Health
ARCH 7430 (fall, spring) Form and Algorithm
ARCH 7260 (spring) Furniture Design Strategic Process
ARCH 7371 (spring) Remixed Realities
ARCH 7420 (spring) Function of Fashion in Architecture
ARCH 7440 (spring) Image, Object, Architecture

History and Theory Electives
ARCH 7110 (fall) Design Research, Writing, and Critical Methodologies
ARCH 7100 (fall) Contemporary Theory 1989-Present
ARCH 7190 (fall) Archigram and Its Legacy: London, A Technotopia
ARCH 7370 (fall) Semi-Fictitious Realms: A History and Future of Virtual Reality
ARCH 6850 (spring) Environmental Readings
ARCH 7120 (spring) Topics in Arch Theory II: Spatial Justice Collective -- Study and Praxis in Philadelphia
ARCH 7121 (spring) Topics in Architecture Theory: Modern Architecture in Japan - Culture, Place, Tectonics
ARCH 7122 (spring) Topics in Architecture Theory: Building Modern China
ARCH 7123 (spring) Topics in Arch Theory II: Forest Histories -- The Architectures of Amazonia
ARCH 7150 (spring) Contemporary Aesthetic Theory
ARCH 7180 (spring) History and Theory of Architecture and Climate

Technology Designated Electives (1 required)
ARCH 7321 (fall) Tech Elective: Geometric Structural Design
ARCH 7322 (fall) Tech Elective: Daylighting
ARCH 7323 (fall) Tech Elective: Matter, Making & Testing: Designing with Next Generation Precast Concrete
ARCH 7324 (fall) Tech Elective: Parametric Life Cycle Assessment for Buildings
ARCH 7325 (fall) Tech Elective: Inquiry into Biomaterial Architectures

ARCH 7326 (fall) Tech Designated Elective: Developing Computational Solutions for Design Problems
ARCH 7320 (spring) Tech Designated Elective: Enclosures - Selection, Affinities & Integration
ARCH 7321 (spring) Tech Designated Elective: Deployable Structures
ARCH 7322 (spring) Tech Designated Elective: Daylighting
ARCH 7323 (spring) Tech Designated Elective: Principles of Digital Fabrication
ARCH 7324 (spring) Tech Designated Elective: Heavy Architecture
ARCH 7325 (spring) Tech Designated Elective: Inquiry into Biomaterial Architectures
ARCH 7326 (spring) Tech Designated Elective: Embodied Carbon and Architecture
ARCH 7360 (spring) Tech Designated Elective: Building Acoustics
ARCH 7361 (spring) Tech Designated Elective: BIM – Building Information Modeling
ARCH 7362 (spring) Tech Designated Elective: Healthy Buildings – Science and Application

Technology and Practice Electives
ARCH 7310 (fall) Experiments in Structures
ARCH 7510 (fall) Ecology, Technology, and Design
ARCH 7610 (fall) Introduction to Real Estate Development for Architects
ARCH 7650 (fall, spring) Project Management
ARCH 7680 (fall, spring) Real Estate Development
ARCH 7340 (spring) Ecological Architecture - Contemporary Practices
ARCH 7540 (spring) Performance Design Workshop
ARCH 7620 (spring) Design and Development

Weitzman School Electives
In addition to courses offered by Weitzman Architecture, students may choose to fulfill elective requirements with courses offered by the other Weitzman departments: Landscape Architecture, City Planning, Historic Preservation, and Fine Arts.

University Electives
Students may also enroll in full-credit graduate courses offered across the University of Pennsylvania's many departments.

Dual Degree
The Master of Architecture Program may be combined as a dual degree with a variety of other degrees in the School and University. The dual degree programs offered with Architecture are:

- Master of City Planning (MCP)
- Master of Landscape Architecture (MLA)
- Master of Science in Historic Preservation (MSHP)
- Master of Environmental Building Design (MEBD)
- Master of Science in Design: Environmental Building Design (MSD-EBD)
- Master of Business Administration (MBA) (at Wharton School of Business)

Certificates
At the end of their third semester, students have the option to apply for certificate programs, which recognize a student's effort to specialize in a particular knowledge area by taking several required courses, generally 5 course units (20 credit hours). The following certificate programs are offered:

- Ecological Architecture
- Ecological Planning
- Emerging Design and Research
- Environmental Building Design
- Energy Management Policy
- GIS and Spatial Analysis

- Historic Preservation
- Integrated Product Design
- Land Preservation
- Real Estate Design and Development
- Time-Based and Interactive Media
- Urban Design
- Urban Redevelopment
- Urban Resilience

NAAB-accredited professional degree programs have the exclusive right to use the B. Arch., M. Arch., and/or D. Arch. titles, which are recognized by the public as accredited degrees and therefore may not be used by non-accredited programs.

Programs must list all degree programs, if any, offered in the same administrative unit as the accredited architecture degree program, especially pre-professional degrees in architecture and post-professional degrees.

Program Response:

The number of credit hours for each degree is outlined below. All accredited programs must conform to minimum credit-hour requirements established by the institution's regional accreditor. Programs must provide accredited degree titles, including separate tracks.

4.2.4 Bachelor of Architecture. The B. Arch. degree consists of a minimum of 150 semester credit hours, or the quarter-hour equivalent, in academic coursework in general studies, professional studies, and optional studies, all of which are delivered or accounted for (either by transfer or articulation) by the institution that will grant the degree. Programs must document the required professional studies courses (course numbers, titles, and credits), the elective professional studies courses (course numbers, titles, and credits), the required number of credits for general studies and for optional studies, and the total number of credits for the degree.

Program Response: N/A

4.2.5 Master of Architecture. The M. Arch. degree consists of a minimum of 168 semester credit hours, or the quarter-hour equivalent, of combined undergraduate coursework and a minimum of 30 semester credits of graduate coursework. Programs must document the required professional studies classes (course numbers, titles, and credits), the elective professional studies classes (course numbers, titles, and credits), the required number of credits for general studies and for optional studies, and the total number of credits for both the undergraduate and graduate degrees.

Program Response:

The Master of Architecture is a comprehensive and rigorous program, preparing graduates for the full range of activities in the profession. The professional studies requirements of the program feature an intensive sequence in Design Studios at its focus. Thorough training is also provided in history, theory, technology, ecology, society, and professional practice. Studios and courses are supported by a rigorous program in visual studies that develops skills in digital and new media. Optional studies are facilitated the upper levels of the program, where students establish individual trajectories by selecting from a range of elective studios and courses with leading figures in design, technology, and theory. The final year culminates in advanced design studios that include research directed by leading designers as well as the option of an independent thesis. Summer programs abroad and studios based in other countries provide opportunities for international studies. The program aims to develop

critical, creative and independent thinking that realizes new potential within an ever-changing world.

This program, resulting in the awarding of a March degree, typically in 3 years, is for students holding liberal arts bachelor's degrees, such as a BA, BS, or BE, which satisfies the program's general studies requirements. Students with an undergraduate degree in a subject other than architecture will typically be admitted to the program beginning in June. To earn the Master of Architecture, they must complete a total of 31 course units (124 credit hours) as follows: 14 course units in design studio, 6 in technology, 3 in history and theory, 1.5 in visual studies, and 1.5 in professional practice. In addition to required courses, students must take 6 electives including a technology elective.

Students with an undergraduate major in Architecture are typically, with some exceptions, admitted to the three-year program. To earn the Master of Architecture, they must complete a total of 29 course units (116 credit hours) as follows: 12 course units in design studio, 6 in technology, 3 in history and theory, 1.5 in visual studies, and 1.5 in professional practice. In addition to required courses, students must take 5 electives.

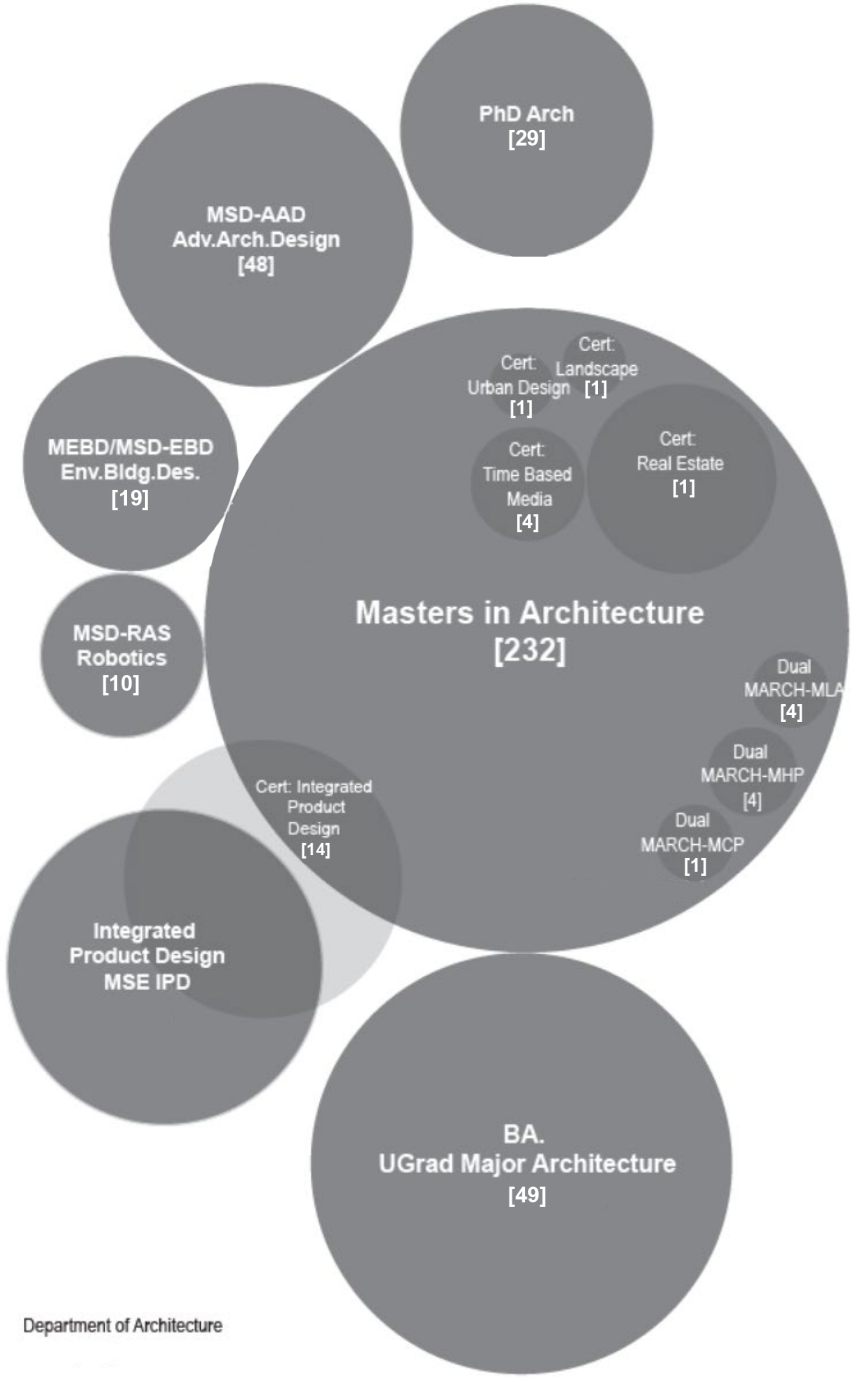
Although rare, it is possible for some students with a four-year pre-professional degree in architecture to be offered the option to be admitted to the program with one year of advanced standing, depending also on the quality of their portfolios and other elements of their applications. To earn the Master of Architecture, they must complete a total of 19.5 course units (78 credit hours) as follows: 8 course units in design studio, 3.5 in technology, 1 in history and theory, .5 in visual studies, and 1.5 in professional practice. In addition to required courses, students must take 5 electives.
The Master of Architecture Program may be combined with certificate, or dual-degree programs offered in the Weitzman School of Design.
Course Sequence:

- *Summer Year 1 - 2 course units**
- Fall Year 1 - 4.5 course units.
- Spring Year 1 - 5 course units.
- Fall Year 2 - 4.5 course units**
- Spring Year 2 - 5 course units.
- Fall Year 3 - 5 course units.
- Spring Year 3 - 5 course units.

* students without an architecture background begin in the summer
**students who receive advanced standing enter in the Year 2

YEAR 1			course units	equivalent credit hours
	ARCH 5010 (501)	Design Studio I	2	8
	ARCH 5110 (511)	History and Theory I	1	4
Fall	ARCH 5210 (521)	Visual Studies I	0.5	2
	ARCH 5310 (531)	Construction I	0.5	2
	ARCH 5350 (535)	Structures I	0.5	2
	ARCH 5990 (599)	500 Technology Lab	0	0
	ARCH 5020 (502)	Design Studio II	2	8
Spring	ARCH 5120 (512)	History and Theory II	1	4
	ARCH 5220 (522)	Visual Studies II	0.5	2

	ARCH 5320 (532)	Construction II	1	4
	ARCH 5360 (536)	Structures II	0.5	2
	ARCH 5990 (599)	500 Technology Lab	0	0
YEAR 2				
Fall	ARCH 6010 (610)	Design Studio III	2	8
	ARCH 6110 (611)	History and Theory III	1	4
	ARCH 6210 (621)	Visual Studies III	0.5	2
	ARCH 6310 (631)	D3: Details, Data and Delivery	0.5	4
	ARCH 6330 (633)	Environmental Systems I	0.5	2
	ARCH 6990 (699)	600 Technology Lab	0	0
Spring	ARCH 6020 (622)	Design Studio IV	2	8
	ARCH 6340 (634)	Environmental Systems II	0.5	2
	ARCH 6360 (636)	Material Formations	1	4
	ARCH 6710 (671)	Professional Practice I	0.5	2
	ARCH 6990 (699)	600 Technology Lab	0	0
	Elective I		1	4
YEAR 3				
Fall	ARCH 7010 (701)	Design Studio V	2	8
	ARCH 7710 (771)	Professional Practice II	1	4
	Elective II		1	4
	Elective III		1	4
Spring	ARCH 7040 (704)	Advanced Design: Research Studio	2	8
	Arch 7320/7360 (732/736)	Technology Designated Elective	1	4
	Elective IV		1	4
	Elective V		1	4
		Total Course Units:	29	
		Total Credit Hours:		116



4.2.6 Doctor of Architecture. The D. Arch. degree consists of a minimum of 210 credits, or the quarter-hour equivalent, of combined undergraduate and graduate coursework. The D. Arch. requires a minimum of 90 graduate-level semester credit hours, or the graduate-level 135 quarter-hour equivalent, in academic coursework in professional studies and optional studies. Programs must document, for both undergraduate and graduate degrees, the required professional studies classes (course numbers, titles, and credits), the elective

professional studies classes (course numbers, titles, and credits), the required number of credits for general studies and for optional studies, and the total number of credits for the degree.

Program Response: N/A

4.3 Evaluation of Preparatory Education

The NAAB recognizes that students transferring to an undergraduate accredited program or entering a graduate accredited program come from different types of programs and have different needs, aptitudes, and knowledge bases. In this condition, a program must demonstrate that it utilizes a thorough and equitable process to evaluate incoming students and that it documents the accreditation criteria it expects students to have met in their education experiences in non-accredited programs.

4.3.1 A program must document its process for evaluating a student's prior academic coursework related to satisfying NAAB accreditation criteria when it admits a student to the professional degree program.

See also Condition 6.5

Program Response:

Admissions

Admissions at Weitzman Architecture is a continuous process. The chair of the admissions committee works with the administration to implement financial aid packages, giving careful consideration to attract a diversity of students. Starting in the fall, data and information are gathered and complied into a school wide report with pertinent information for the Department of Architecture. The process proceeds to analyze data and chart goals and strategies for the coming year's applications. Visits to a wide array of universities, colleges, and organizations by faculty to present Weitzman Architecture's program and elicit interest from prospective students, particularly with the aims of diversifying the pool of applicants and making the process of application more equitable.

The application process begins with an on-line form. Applicants are requested to provide a portfolio, resume, personal statement, a video interview answering a series of questions, transcripts, language proficiency test results, and letters of recommendation. The deadline for submittal is set for early January. Once the applications are assembled, the admissions team, made up of full-time faculty, undertakes a multi-step review. Initially, the applications are divided by academic background. For example, applicants with a B.A. college degree in architecture form one of the groups. Approximately fifteen "first pass" reviews are conducted by the admissions team based on a numerical rating system, followed by a "second pass" conducted to narrow the field to applicants best suited for Weitzman Architecture. Thoughts, impressions, and concerns are exchanged in open discussion that includes both faculty and administration to arrive at students likely to receive an acceptance as well as those to be placed on a waiting list. In certain cases, where there are inconsistencies among items submitted in an application, the chair of the admissions committee will contact the applicant for clarification. The chair of the admissions committee works with the administration to implement financial aid packages, giving careful consideration to attract a diversity of students.

Transcripts

Students are required to submit transcripts from each college and university that they have attended for credit. This includes institutions where they have taken courses but did not receive a degree.

Personal Statement

All applicants must upload a personal statement, no more than 500 words long, describing background, interest in chosen field, and academic and career objectives. Applicants are asked to be as specific about the areas in which they plan to study.

Resume
All applicants must upload a resume including employment, activities, community service, education, and academic or professional honors.

Community Essay
Candidates must submit an essay that shares anything in the applicant's background or life experience – or a unique perspective on architecture as a field of study – that would contribute to the classroom and community at Weitzman Architecture, the School, and University.

Letters of Recommendation
Three letters of recommendation are required, with at least two from college instructors. Applicants who have been out of school for several years may submit recommendations from employers or others in a position to evaluate their professional abilities and academic potential.

Portfolio
The portfolio is a collection of an applicant's creative work. As a visual essay, it tells a story of a person's interests, skills, and development over time. It should include projects that best express one's visual, spatial, and constructional abilities. These projects might include drawings, paintings, sculpture, or photography; graphic, industrial, or interior design; architectural, landscape, or urban design. The committee members who evaluate the portfolios look less for competence in architectural design and more for a coherent demonstration of visual and spatial abilities expressed through a basic understanding of material and construction.

Video interview
Candidates have the option to submit a short video interview following submission of the application. Not submitting a video interview will not negatively impact an application.

Standardized Tests
Graduate Record Examination (GRE) scores are *not required* of applicants to the M. Arch program. Applicants whose native language is not English and whose undergraduate training of at least four years has not been conducted in English must submit an English language proficiency test. The English language proficiency requirement will be waived for applicants who received a three-year undergraduate degree, as long as the entire course of study was conducted in English. The IELTS, Duolingo English Test, or TOEFL test (including the TOEFL iBT Special Home Edition offered by ETS) are accepted for this requirement. No other English language proficiency tests are accepted.

4.3.2 In the event a program relies on the preparatory education experience to ensure that admitted students have met certain accreditation criteria, the program must demonstrate it has established standards for ensuring these accreditation criteria are met and for determining whether any gaps exist**.**

Program Response:

Advanced Standing
The Architecture Department offers limited opportunity for advanced standing to the second year of studies, evaluated based on two factors: (1) exceptionally proficient portfolio, and (2) thorough examination that previous coursework is equivalent to those required as part of the

core curriculum in the first year at Weitzman. Students do not apply for advanced standing; they are identified during the admissions review as exceptionally qualified and are only advanced after completed coursework syllabi is reviewed and accepted by Weitzman faculty. For this reason, very few students have matriculated into advanced standing in the last five years.

Course Waivers

Entering students may be able to waive non-studio required courses. The process of evaluating waivers varies for each course under consideration. The granting of a waiver does not reduce the number of course credits required to fulfill the program's degree requirements. Time to degree, even for those students who waive out of certain required support courses, remains at three years. For the required courses in *Construction*, the student is required to meet in person with the instructor. Supporting evidence defined by the teacher showing previous study is reviewed so that the teacher can determine if a waiver is possible.

For Arch 5350 *Structures I*, students must submit a syllabus of courses previously taken and a transcript for their undergraduate school indicating that they received a grade of "B" or better in two structures courses. If acceptable to the instructor, the students are required to take a qualifying exemption exam and receive a grade of 80% or better in order to receive a waiver. For Arch 5360 *Structures II*, the process is repeated, and an additional test is given. In cases where a student has an undergraduate degree from Penn and has previously taken our Structures courses, they are automatically given a waiver.

History/Theory required courses rarely grant waivers. In cases where a waiver has been granted, it is based on in-person meetings with the instructor.

Environmental Systems ARCH 6330/6340 requires students applying for a waiver from to demonstrate sufficient prior coursework in the following areas with a syllabus, transcript, and documentation of relevant coursework required as part of the application for approval. To waive out of the first semester only (ARCH6330), the previous coursework should cover the topics of thermal comfort, passive heating and cooling and solar radiation and daylighting. To waive out of the second semester as well (ARCH 6340), student need to additionally be familiar with mechanical systems and heat pumps (including heating and cooling load calculations and the psychrometric chart), materials' embodied carbon and LCA, energy flow and building performance.

Students who wish to waive out of *Professional Practice* shall submit an official transcript with the proposed equivalent course and grade highlighted. The student shall also submit a complete syllabus listing all course lectures and lessons as well as assignments and any texts assigned for reading. The student shall also submit the required waiver request form indicating the course that will take the place of the course being waived.

Once an instructor has agreed to a waiver, the student must secure their signature on the department's waiver form. In all instances, the student must select a substitute course of equal credit value that is identified on the waiver form and submitted to the department chair for final agreement and signature.

4.3.3 A program must demonstrate that it has clearly articulated the evaluation of baccalaureate-degree or associate-degree content in the admissions process, and that a candidate understands the evaluation process and its implications for the length of a professional degree program before accepting an offer of admission.

Program Response:

All applicants are required to have a baccalaureate degree, either a B.A., B.S., or B, Engineering, and include a transcripts of baccalaureate work which is reviewed by the department Admissions Committee. In all cases, the undergraduate degrees are not from NAAB-accredited programs.

5—Resources

5.1 Structure and Governance

The program must describe the administrative and governance processes that provide for organizational continuity, clarity, and fairness and allow for improvement and change.

5.1.1 Administrative Structure: Describe the administrative structure and identify key personnel in the program and school, college, and institution.

Program Response:

The University

The University of Pennsylvania is a non-profit corporation chartered under the laws of the Commonwealth of Pennsylvania. Under the Charter, the Trustees are charged with the ultimate responsibility for the course of the University. The administrative management of the University, on the other hand, is delegated by the Trustees to the President. The University's faculties participate in the decision-making process through two major bodies advisory to the President and administration—the University Council and the Faculty Senate. Non-faculty employees and students also participate with the faculty in the University's governance through their membership in the University Council and in an extensive number of advisory groups and committees. In addition, the University has a policy on consultation that articulates procedures for involving faculty, staff and students in decision-making where the administration has final or primary responsibility.

Organizationally, the University is divided into twelve schools. Each school is under the direction of a dean. Some schools are further subdivided into departments.

The officers of the University are the President, the Provost, the Vice Presidents, the Secretary, the Treasurer, the Comptroller, and the General Counsel.

Subject to the policies of the University, all officers except the President are elected by the Trustees upon nomination by the President and are suspended or terminated by the Trustees upon the recommendation of the President.

The President may appoint a temporary successor or substitute to act as required because of the death, absence, disability, suspension, or termination of any officer of the University other than the President, but such temporary appointments are effective only until the next meeting of the Trustees or the Executive Committee, at which time a successor is nominated and elected either on an acting or a permanent basis.

With the consent of the President and subject to the policies of the University, officers may appoint such associates and assistants and assign them such duties are appropriate.

The President

The President holds office upon such terms as the Trustees determine.

As the Chief Executive Officer of the University, the President is its educational and administrative head. The President is responsible to the Trustees for the conduct, coordination, and quality of the University's programs and for their future development.

The Provost

The Provost is the officer responsible for the conduct, coordination, and quality of the University's academic programs and for the planning of their future development. Hence, the Provost is crucially involved in the recruitment and maintenance of a faculty of the highest distinction in research and teaching. The Provost also is concerned with maintaining a student body of superior quality and thus exercises oversight over academic program

standards and over the admissions process. All deans report to the Provost, and under the President, the Provost has ultimate authority for all academic budgets.

The Secretary
The Secretary of the University attends and keeps minutes of the meetings of the Trustees, acts as secretary of all boards and committees of the Trustees, and is custodian of communications, reports, and other documents of importance presented to the Trustees.

The Treasurer
The Treasurer has custody of all evidence of ownership of real or personal property owned by the University or pledged to it, other than that evidence in the custody of the Investment Board. The Treasurer also has custody of all policies of insurance and has the authority to accept receipt for the same on behalf of the Trustees, and under their supervision arranges for the safekeeping thereof.

The Comptroller
The Comptroller maintains a complete set of accounts, except those maintained by the Treasurer, showing in detail the business and financial transactions of the University. The Comptroller is responsible for the proper keeping of the accounts of every department of the University and has authority to direct the methods, including audit and control, by which such accounts are kept.

The General Counsel
The General Counsel represents the University in legal matters. All matters requiring legal advice or legal action are referred to the General Counsel.

Schools of the University of Pennsylvania
Faculty of Arts and Sciences
The School of Arts and Sciences, including the College of Arts and Sciences as its undergraduate division, the Graduate Division of Arts and Sciences, and the College of Liberal and Professional Studies, as its lifelong learning program.

- The Perelman School of Medicine
- The School of Law
- The School of Engineering and Applied Science
- The Stuart Weitzman School of Design
- The School of Dental Medicine
- The Wharton School
- The School of Veterinary Medicine
- The Graduate School of Education
- The School of Social Policy and Practice
- The School of Nursing
- The Annenberg School for Communication

Weitzman School Administrative Structure and Key Personnel
The Dean of the Weitzman School of Design is the administrative leader of the school. Under the dean serves the Weitzman department chairs and the administrative offices, including student services, facilities, communication, development and alumni outreach, the school's research and practice centers, and other administrative offices. Consult 5.1.2 for a thorough elaboration of the Weitzman administrative structure and key personnel.

5.1.2 Governance: Describe the role of faculty, staff, and students in both program and institutional governance structures and how these structures relate to the governance structures of the academic unit and the institution.

Program Response:

University Governance

The University of Pennsylvania is governed by the University's offices of the president and the provost. Consult 5.1.1 for elaboration on these roles.

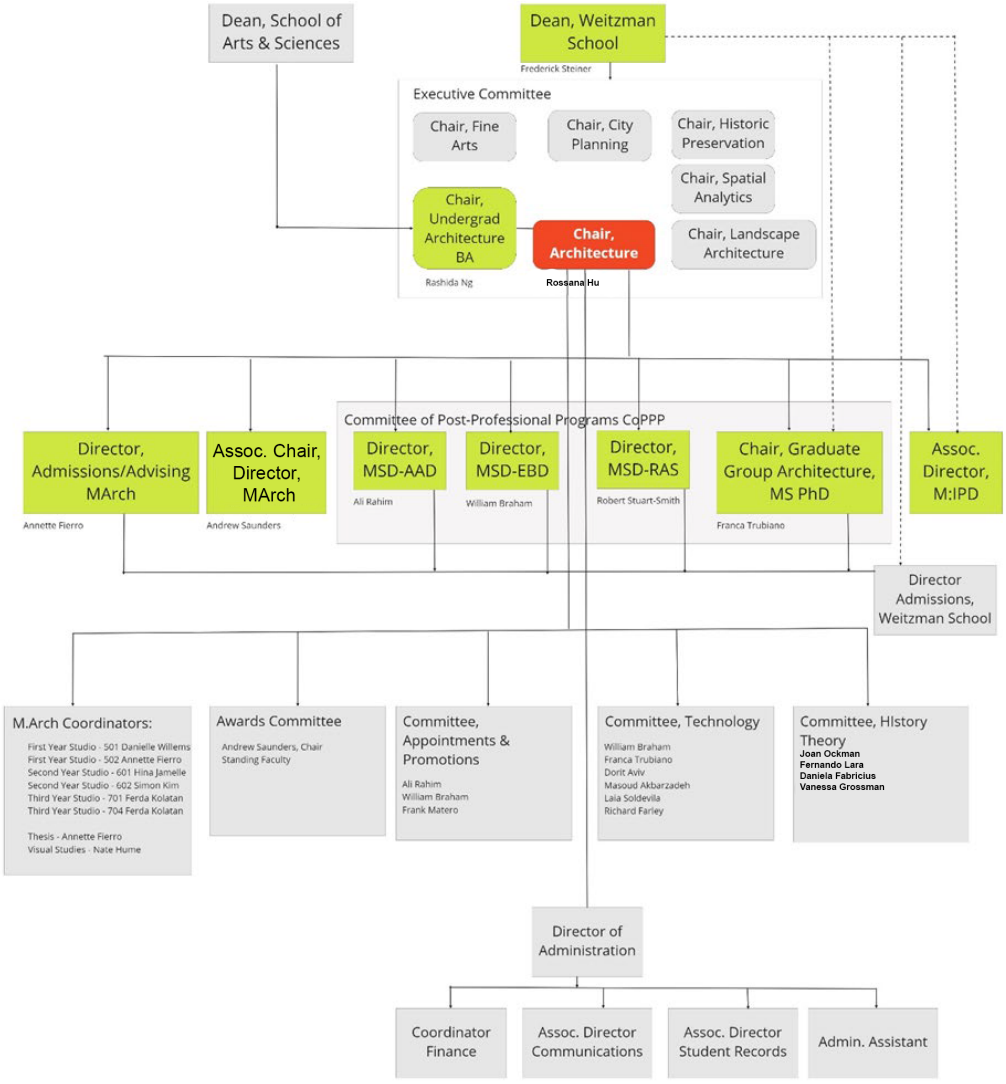
Weitzman Governance

The Dean of the Weitzman School of Design, who reports to the University Provost, oversees all of the School's financial, administrative and academic operations with support from the senior administrative team (the "Senior Staff") and the department chairs and research center directors (the "Executive Committee"). Both the Senior Staff and Executive Committee meet monthly to review critical administrative and academic issues, respectively; develop strategic priorities; implement schoolwide initiatives; and develop relevant policies and procedures. New policies, procedures, and initiatives that are relevant to the School of Design faculty are discussed and, as appropriate, voted on at monthly faculty meetings. Standing faculty, associated faculty and academic support instructors are invited to attend monthly faculty meetings. Other school committees include: the Academic Freedom & Responsibility Committee, the Curriculum Committee, the Personnel Committee, and the Justice and Belonging/DEIB Committee. The school also appoints a faculty representative to the University Faculty Senate and to the Provost Staff Conference Subcommittee, which reviews faculty promotions. Weitzman faculty are also invited to participate in committees, task forces, and working groups with faculty in schools across the University. The governance structure, as derived from the Office of the Provost of the Weitzman School of Design, is as shown in the following chart.

Department Governance and Committee Structure

The governance and committee structures of the Department of Architecture at the Weitzman School is described in the following chart:

Organization Chart



Structure of the Academic Staff

Standing Faculty, The essential requisite for membership in the Standing Faculty is a commitment to both the advancement and the communication of knowledge. The Standing Faculty is composed of all faculty members with tenure or in tenure-probationary status. Permissible ranks in the Standing Faculty are Professor, Associate Professor, and Assistant Professor.

Associated Faculty Members of the Associated Faculty play varied and important roles in the teaching, research, and professional programs of the University. However, they do not acquire tenure. Permissible ranks in the Associated Faculty are those used in the Standing Faculty preceded by one of the descriptive modifiers “Research,” “Clinical,” “Adjunct,” “Visiting,” “Visiting Executive,” “Practice” or “Wistar Institute.” Artists-in-Residence are also members of the Associated Faculty.

Practice Faculty In accordance with the Trustees resolution adopted in June 2000, this rank includes Associate Professors of Practice and Full Professors of Practice whose appointments may be made for terms of up to five years, renewable. The number of appointments is limited to no more than thirty percent of the number of standing faculty in the school and are not to exceed the number of standing faculty in any academic department.

Academic Support Faculty Members of the Academic Support Staff include many individuals who participate in the University's teaching, research, or clinical services, but who are not eligible for appointment to the Standing or Associated Faculty. Each appointment to the Academic Support Staff is for a term without tenure or tenure significance. The rank of Lecturer is flexible, denoting eminent scholars whose appointments at the University are temporary or part-time, scholars still in professional training, or persons who do not possess the normally expected scholarly credentials but nevertheless provide valuable instructional services. Appointments are for one year or less but are renewable. Full-time service in the rank of Lecturer is limited to three consecutive years, except where additional appointments are approved by the Provost. A limited number of lecturers who have completed four years of full-time service in that rank may be considered for appointment as a Senior Lecturer. Appointments to the rank of Senior Lecturer shall be for periods of no more than four years, but successive appointments are allowed.

Committee, Faculty + Staff Assignment List: Weitzman School of Design

Provost	Board of Advisors	Dean	Executive Assistant
John L. Jackson	Matthew H. Nord, W'01, Chair John Carrafiell Roberta Fine Dranoff, MCP'74 Loren Easton, C'01, WG'07 Jeffrey Fine, C'76, MArch'78 Mark Gardner, MArch'00 Jay Goldman, W'79 Mark Goldstein, C'83, W'83 Dawn Gonick, MSHP'94 Eric Gribetz, W'95 Vicki Panzier Gross, W'87 Kevin Penn, W'83 Michael Halpern, W'83 Mason Haupt, W'77 Lee Huang, W'95, MPA'06 Albert Kalimian, W'79 Mireya Kam, C'93, W'93	Frederick Steiner	Kait Ellis

	Lori Kanter Tritsch, MArch'85 Steve Lefkowitz Ben Lin, W'05 Richard Linhart, W'83 Michael G. Manasse, W'90, L'96 Bonnie Stone Sellers, CW'73 Amrita Sen, W'92 David R. Smith, MArch'90 Patricia Pickman Udell, C'78 Stuart Weitzman, W'63 Barbara Wilks, MLA'93		
Vice Dean for Administration & Chief of Staff	Development and Alumni Relations	Research/Practice Center Directors	Department Chairs
Leslie Hurtig	*Assistant Dean* Jeff Snyder *Sr. Associate Director of Individual Giving* Sonja Chen *Associate Director, Annual Giving & Alumni Relations* Ashley Colabella *Sr. Associate Director, Communications & Stewardship* Naomi Davidoff	*Co-Directors, Kleinman Center* Mark Alan Hughes & Sanya Carley *Executive Director, PennPraxis* Ellen Neises *Director, CEBD* William Braham *Curator & Collections Manager, Architectural Archives* Bill Whitaker *Director, McHarg Center* Robert Fleming *Director, Center for the Preservation of Civil Rights Sites* Amber Wiley	*Graduate Architecture* Rosanna Hu *Undergraduate Architecture* Rashida Ng *Landscape Architecture* Catherine Seavitt Nordenson *City Planning* Lisa Servon *Historic Preservation* Frank Matero *Graduate Fine Arts* Ken Lum *Undergraduate Fine Arts* Matt Neff
Student Services	Administrative Services	Operations and Planning & Design and Construction	Communications

Director of Admissions & Financial Aid Jamie Eidlin *Registrar* Emily McCully *Associate Director of Professional Development & Leadership* Kali Meeks *Associate Director of Student Support* Kayla Richards *Director of Diversity, Equity, Inclusion, & Belonging* Vacant	*Director of Faculty Affairs & Online Learning Initiatives* Karen Tufarolo *Sr. Director of Finance* Christopher Cataldo *Director of Research Support Center* Jessica DeJesus *Director of Information Technology* Alexander Jarymovych *Director of Online Innovation* Robert Fleming	*Sr. Director* Karl Wellman *Director of Fabrication Lab* Dennis Pierattini	*Sr. Director* Michael Grant *Coordinator* John Caperton

Committee + Faculty Assignment List: Architecture Department

Standing Faculty	Admissions	Awards	Curriculum
Tenure Rossana Hu, *Chair* Rashida Ng Andrew Saunders Franca Trubiano Annette Fierro William Braham Winka Dubbeldam Ali Rahim Marilyn Taylor Simon Kim Fernando Lara *Tenure-track* Ferda Kolatan Masoud Akbarzadeh Dorit Aviv Daniela Fabricius Laia Mogas-Soldevila Robert Stuart-Smith Vanessa Grossman	*Director of Admission* Annette Fierro All Standing and Full Time Faculty	*Chair* Andrew Saunders All Faculty	*Design* Andrew Saunders, *Chair* Daniel Markiewicz Hima Jamelle Ferda Kolatan Annette Fierro Nate Hume *History & Theory* Joan Ockman Daniela Fabricius Fernando Lara Vanessa Grossman *Technology* Franca Trubiano, *Chair* Richard Farley Dorit Aviv Philip Ryan Robert Stuart-Smith Laia Mogas-Soldevila

Dual Degree	Lectures	Library Liaison	Student Advising
William Braham	Andrew Saunders	Mia D'Avanza	Annette Fierro
MSD Program Admissions	PhD Admissions	Undergrad Admissions	
Chair William Braham *Faculty* Ali Rahim Robert Stuart-Smith	*Chair* Franca Trubiano *PhD Faculty* William Braham Fernando Lara Masoud Akbarzadeh Dorit Aviv Daniela Fabricius Laia Mogas-Soldevila Vanessa Grossman	*Chair* Rashida Ng Undergrad Faculty	

Dean	Director	Associate Director	Associate Director
Administration Frederick Steiner	*Admissions & Curriculum* Kait Eidlin	*Student Affairs* Kayla Richards	*Career Development* Kali Meeks

Directors			
MSD-AAD Ali Rahim	*MSD-EBD* William Braham	*MEBD* William Braham	*MSD-RAS* Robert Stuart-Smith
MS Franca Trubiano	*PHD* Franca Trubiano	*Undergraduate* Rashida Ng	*IPD* Sarah Rottenburg
Certificates			
Ecological Architecture William Braham	*Ecological Planning* Tom Daniels	*Emerging Design and Research* Staff	*Environmental Building Design* William Braham
Energy Management and Policy Oscar Serpell	*GIS and Spatial Analysis* Allison Lassiter	*Historic Preservation* Frank Matero	*Integrated Product Design* Sarah Rottenberg
Land Preservation Tom Daniels	*Landscape Studies* Catherine Seavitt	*Real Estate Design and Development* Vincent Reina	*Time-Based and Interactive Media* Joshua Mosley
Urban Design Catherine Seavitt	*Urban Redevelopment* Eugenie L. Birch	*Urban Resilience* Matthijs Bouw	

Title IX Coordinator	*IDP / NCARB*	Academic Freedom	NAAB Coordinator
Michele Rovinsky-Mayer	Phillip Ryan, RA	William Braham	Andrew Saunders
ACSA Councilor			
Andrew Saunders			

Staff of Weitzman Libraries and Archives

The Vice Provost and Director of Libraries at the University of Pennsylvania is responsible for planning, acquiring, managing, leveraging and preserving the knowledge and information resources that support Penn's instructional and research programs. They are supported and advised in this role by the Penn Libraries Board of Advisors, The Orrery Society Council, The Young Alumni Board, and the Penn Libraries Office of Advancement.

For the University's 23 Libraries and 6 associated libraries, including Van Pelt (the University Library) Fischer Fine Arts (the Weitzman School's library), and the Architectural Archives, the management structure includes the Vice Provost and Director of Libraries, who has ultimate oversight for Penn Libraries. But a series of directors for each library is in place who manage specific units and services on behalf of the Vice Provost. For further details on library governance and on Fisher Fine Art's facilities and collection, please consult section 5.8.

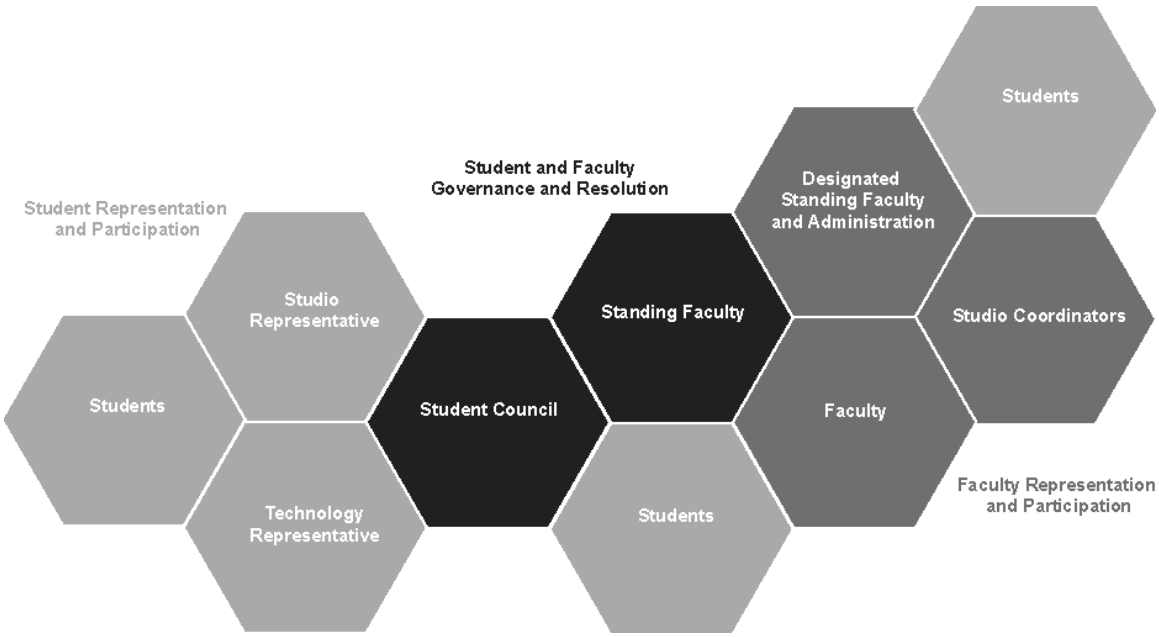
Office of the Registrar

The Registrar and Associate Registrar work collaboratively with the Dean, Vice Dean, department chairs, faculty, and Weitzman staff to:

- Oversee student records and registration.
- Coordinate the approval/publication of new course descriptions in Penn systems.
- Provide enrollment (and related) verifications to enrolled students and alumni.
- Add/remove (or provides guidance about) Holds on student records that prevent registration.
- In conjunction with the departments, coordinate dual-degree and certificate programs.
- Clear students for graduation and work closely with the OUR (Office of the University Registrar) on posting of degrees.
    - Manage Leaves of Absence, Withdrawals (from courses or programs), and other status changes
- Serve as point of contact for student bills (note: billing is separate from Financial Aid)
- Staff the faculty Weitzman Curriculum Committee and work with the OUR and
- Provost's Office to record/update approved curriculum changes.
- Manage the Weitzman Student Handbook and provide guidance to students, faculty,
- and staff relating to academic policies and procedures.
- Bring policy issues to the Executive Committee as needed.
- Work closely with the International Student and Scholar Services office to support.
- international students applying for CPT and OPT and maintaining approved student.
- status in accordance with their visa
- Report on student enrollment and data from the University's data warehouse (in
- reports used by departments, facilities, Finance, the Enrollment Management team,
- etc.)
- Approve access requests from faculty and staff for advising/administrative roles in
- Pennant

Student Representation

Students have multiple paths to access and interact with faculty and administrative governance at the school. The Weitzman Student Council (StuCo) is a student governing body, whose representatives are elected by student peers, which represent students in all degree programs at Weitzman to the Standing Faculty and faculty leadership, among other roles StuCo provides (see full description in Section 1). Students have direct access to StuCo representatives and Standing Faculty members but can also interact with school governance through their studio representatives (one studio rep and one tech rep per studio section, each being students within that section). Finally, students can always speak with their studio coordinators or designated Standing Faculty representatives to represent students to the faculty on their behalf. See the diagram below for clarification:



StuCo Organizational chart

5.2 Planning and Assessment

The program must demonstrate that it has a planning process for continuous improvement that identifies:

5.2.1 The program's multiyear strategic objectives, including the requirement to meet the NAAB Conditions, as part of the larger institutional strategic planning and assessment efforts.

Program Response:
The University issued a strategic plan, *In Principle and Practice: Penn's Focus on Tomorrow: A Strategic Framework for the University of Pennsylvania,* in the Fall of 2023. Our current Weitzman goals and initiatives are in synchronization and compliance with the University's plan.

Planning and Assessment
Planning in the department is accomplished in coordination with the school's planning effort. Annual goals and expectations are collected from various departments, along with those generated by the Dean's office. The department, in coordination with the school's planning activity, follows a similar process that includes input from the faculty, students, staff and alumni.

Weitzman School Three-Year Goals
Strategic Goal 1 – Strengthen Weitzman Facilities to Create A State-of-the-Art Environment for Art and Design Education and Research

- Year 1: Complete Weitzman Hall transition, including design documents and transition plan.
- Year 2: Complete Construction and plan for enhancements to Franklin Annex and the Fabrication Lab and plan to fund; equipment and facilities maintenance and renewal.

- Year 3: Identify opportunities for new programs and programmatic synergy in Weitzman Hall and maximize its potential to assist with recruitment; implement improvement to the Fab Lab and Franklin Annex

Strategic Goal 2: Continue to Attract the Highest Quality Applicants and Improve the Student Experience at Weitzman

- Year 1: Increase funding for financial aid; strengthen recruitment efforts by increasing recruitment staff and utilizing more targeted social media campaigns and increase the number of URM students and provide additional support for current URM students; implement a comprehensive student wellness campaign to continue promoting a collegial, collaborative, and supportive community and culture at Weitzman.
- Year 2: Increase funding for financial aid; implement a comprehensive student wellness campaign to continue promoting a collegial, collaborative and supportive community and culture at Weitzman.
- Year 3: Continue efforts to increase financial aid, strengthen recruitment, and promote student wellness.

Strategic Goal 3: Develop and Implement a Comprehensive Energy Design and Sustainability Strategy to Combat Climate Change and Maximize Impact

- Year 1: Convene Weitzman faculty involved in energy design (the Weitzman Hub for Energy Design/WHED) and identify opportunities for increased collaboration among faculty doing research in energy design, energy policy, and sustainability; identify potential funding opportunities.
- Year 2: Identify opportunities for partnerships with faculty doing similar research in other schools in conjunction with the Kleinman Center for Energy Policy and submit interdisciplinary proposals; explore lab and space options.
- Year 3: Implement proposal ideas and submit request to federal and other funders.

Strategic Goal 4: Develop a School-wide Strategy for Promoting Equity and Engaging with Communities

- Year 1: Work with PennPraxis to disseminate models and case studies for collaborative community engagement; increase action-oriented research related to advancing equity.
- Year 2: Develop and implement shared, School-wide principles for community engagement best practices.
- Year 3: Establish long-term partnerships with community groups and neighborhoods in West Philadelphia and beyond.

Strategic Goal 5: Increase Funding for Fellowships and Programs and Develop the Weitzman Board

- Year 1: Grow the Weitzman school endowment by $1M and increase the diversity of the School's Board of Advisors; develop a fundraising strategy in Asia.
- Year 2: Increase financial aid funding for fellowships by $1M in terms and endowment gifts. Utilize the Weitzman Dean transition to increase fundraising for fellowships.
- Year 3: Increase financial aid funding for fellowships by $1M in terms and endowment gifts; implement Asia fundraising strategy.

Strategic Goal 6: Strengthen the Weitzman Faculty with an emphasis on design excellence and linking principles to professional practice.

- Year 1: Orient department chairs in Architecture (ARCH) and Landscape Architecture (LARP) and ensure a smooth transition; increase the % of underrepresented minority (URM) and female standing faculty.

- Year 2: Orient new chairs in City Planning (CPLN) and Fine Arts (FNAR). Implement strategy to improve faculty mentoring at Weitzman and clarify the tenure and promotion process. Increase support for faculty sponsored research.
- Year 3: Orient new chair in Historic Preservation (HSPV). Continue efforts to increase the diversity of Weitzman faculty, strengthen faculty mentoring, and update the School's Faculty Handbook.

Strategic Goal 7: Continue to Strengthen Academic Programs and Curriculum at Weitzman

- Year 1: Convert the Graduate Program in Historic Preservation (HSPV) into a formal department. Conduct a comprehensive review of curricula in Architecture and Landscape Architecture once new chairs are in place; ensure sufficient representation of non-Western and previously underrepresented perspectives and voices; partner with the Center for Teaching and Learning to conduct regular equity course reviews.
- Year 2: Conduct a comprehensive review of curricula in City Planning, Fine Arts, and Historic Preservation with the appointments of new chairs in these departments. Identify opportunities to implement new or grow existing master's programs based on student demand.
- Year 3: Grow existing and implement new master's programs.

Strategic Goal 8: Continue To Strengthen and Support the Weitzman Staff

- Year 1: Develop and implement a staff training program; continue to support an active and inclusive Staff Engagement Program; continue efforts to increase collaboration among faculty and staff.
- Year 2: Conduct a review to identify unmet staffing needs and identify a strategy to support additional positions, including a Director of Human Resources and possible additions to the IT staff.
- Year 3: Continue to review and support Weitzman staff.

Strategic Goal 9: Continue to increase, strengthen, and support faculty research.

- Year 1: Continue to recruit faculty with a commitment to pursuing sponsored research awards. Provide mentoring to Junior faculty to assist them in developing ambitious research agendas. Encourage partnerships with faculty in other schools.
- Year 2: Review the staffing in the school's Research Support Center to ensure that it is able to keep up with faculty demand; respond to priorities outlined in the University's in Principle and Practice Strategic Framework
- Year 3: Continue mentoring Junior faculty to assist them in developing ambitious research agendas; assess the adequacy of research space and explore opportunities to support additional space.

Strategic Goal 10: Increase the Visibility of the School & Advancing the Professions

- Year 1: Strengthen the Weitzman School website; increase faculty publications and promote faculty research.
- Year 2: Develop and issue a Weitzman year-end-report and/or magazine; strengthen development and alumni relations publications. Continue to host conferences related to research, scholarship, and pedagogy in the school's various professions. Encourage faculty participation in relevant academic and practice associations.
- Year 3: Continue promoting the accomplishments and scholarship of Weitzman faculty through publications, conferences, lectures, written materials, articles, and the School's website.

Department Priorities

1. Students (Including Admissions)

Priorities FY23/24	Expected Performance

Increase the department's visibility at schools with strong architecture programs, including Historically Black Colleges (HBCUs) and other Minority Serving Institutions (MSIs).	Faculty will lecture and "visit" remotely or physically those universities and schools from which we receive top - and diversity applicants.
Continue to support the Department's DEI committee and implement strategies to promote greater inclusivity in the department	Adjust curriculum / reading lists if needed. understanding of student issues re DEI.

2. Faculty

Priorities FY23/24	Expected Performance
Prepare for Accreditation	Fall report [Andrew Saunders and new hire] and Spring Accreditation [Andrew and new Chair]
Strengthen the department's academic advising program.	Faculty has requested this. Greater understanding in advising the students in DEI and other issues.
Hire new faculty	Fall Faculty hires and planning is pre-planned to assist change of Chair
Orient the new department chair.	A robust discussion and a clear set of goals for FY23-24 from new chair communicated to our faculty
Strengthening the diversity of the faculty	Continued progress from recent hires, casting a wider net in searches in hiring of lecturers and associated faculty
Establish guidelines for AI use in all courses.	Coordinate with CETLI University website. Incorporate in syllabi in all courses

3. Curriculum/Academic Programs

Priorities FY23/24	Expected Performance
Continue to incorporate DEI themes and topics into all required courses.	A thorough review of each course undertaken by the instructor and reviewed by the Chair & standing faculty to ensure the topics taught & readings include diverse voices and topics.
MSD programs	All MSD's need to create larger diversity in faculty and student population through better and more regular marketing. Directors falling behind in publications & posters. They asked for independence in meeting / coordination. This is not happening regularly enough.

4. Research

Priorities FY22	Expected Performance
Keep growing research possibilities for faculty.	Faculty to raise funds & buy out teaching [rather than simply lowering teaching schedule]
Launch and curate the faculty research section of the website [in progress].	Provide a forum for faculty to post their research and motivate new faculty members to pursue and promote their research. Allow students to be aware of ongoing research projects. Create a larger understanding of

	the depth and range of intellectual work at Weitzman and in architecture in general

5. Diversity, Equity & Inclusion

Priorities FY23/24	Expected Performance
A review of all core courses to incorporate underrepresented voices.	Following a review, all core courses should ensure they include diverse perspectives and include a variety of viewpoints.

6. Visibility

Priorities FY23-24	Expected Performance
Important: a Symposium every year	The Fall lecture series is pre-planned to assist change of the Chair. To keep visibility up: A symposium on a topic TBD that also features our faculty and students.

5.2.2 Key performance indicators used by the unit and the institution

Program Response:
We outline our objectives, key performance indicators, and means of self-assessment in a single chart in section 5.2.3. To identify the key performance indicators, please consult the second column ("KPI", Expected Performance) of this chart.

5.2.3 How well the program is progressing toward its mission and stated multiyear objectives.

Program Response:
Faculty

Priorities FY23	KPI, Expected Performance	Self Assessment
Increase the % of underrepresented minority (URM) and female standing faculty	• In FY 22, 11 % of standing faculty identified as URM. The Weitzman School will seek to increase the number of standing faculty who are URM to 14%. • In FY 22, 43% of standing faculty were women. The School will aim to increase the % of standing faculty who are women to 45%.	• Weitzman has exceeded this performance expectation; in Spring FY 23, 16% of Weitzman standing faculty identify as URM • Weitzman also exceeded this expectation; in Spring FY 23, 46% of Weitzman standing faculty identify as women.
Increase faculty engagement in research, particularly sponsored research	• Continue to facilitate the faculty's efforts to develop relationships with funders and foundations that could support research at Weitzman. • Increase the number of faculty submitting proposals through ORS by 2%.	• As of January 2023, Weitzman has already been awarded $4.4M in research revenue, an increase of 12% over last year's total awards. We anticipate additional research revenue by June 30, 2023.

Identify and hire department chairs in Architecture (ARCH) and Landscape Architecture (LARP), and ensure a smooth transition	• Two candidates will be identified and agree to fulfill the chair roles in ARCH and LARP.	• Weitzman faculty and student committees identified candidates to fill chair positions in Landscape Architecture and Architecture; the new chairs will be joining the School in July 2023 and January 2024, respectively
Increase dialog between design and technology and history and theory faculty	• Strengthening integration of technology, history and theory, and professional practice awareness across the design sequence, including across all six design studios.	• All faculty are assigned to internal reviews so a collective assessment by the entire faculty is made of student work at the mid-semester. • Coordinate deliverables between all courses in a given year and semester to the extent possible through a general calendar.
Strengthen linkages between all studio courses and years.	• Review midterm progress of all students against learning objectives and shared values.	• Assess curricular progress at the midterm and through monthly meetings, allow corrections to be made through the process. • Implement an internal midterm jury distribution to increase awareness by faculty of work in other studios and courses.

Students

Priorities FY23	Expected Performance	Self-Assessment
Increase the number of URM students and provide additional support for current URM students	• In FY 22, 42% of US School of Design students self- identified as minority and 27% as URM. The Weitzman School will seek to maintain or slightly increase the number of students who self-identify as minority and URM. • Increase scholarships for URM minorities.	• Weitzman has exceeded this performance expectation; in FY 23, 44% of US Weitzman students self-identified as minority and 29% as URM. • Scholarships for URM students increased by 3 % between FY 22 and FY 23 – the highest amount offered to date
Implement a comprehensive student wellness campaign to continue promoting a	• Increase awareness of campus mental health and other student support resources among students and faculty. • Increase student wellness programming.	• Weitzman hosted several events throughout the year to help students become more aware of campus resources, including presentations at New Student Orientation and

collegial, collaborative and supportive community and culture at the Weitzman School of Design	• Under the leadership of the new Director of Justice & Belonging (JxB) and in partnership with the JxB Committee, implement programs to promote positive racial and ethnic relations and inclusion.	regular resource pop-ups featuring: *Public Safety, Wellness at Penn, Graduate Student Center, Career Services, Penn Libraries, International Student & Scholar Services, Financial Wellness, Weingarten, Penn Women's Center, LGBT Center, Greenfield Intercultural Center, Pan-Asian American Community House.* The School also hosted regular events as part of a *Be Well Weitzman Initiative*. • Weitzman's new Director of Justice & Belonging hosted several events and workshops for faculty, staff, and students throughout the year and implemented a micro-grant program for students interested in promoting inclusivity on campus.
Strengthen our facilities resources that are available to students.	• Increase awareness of facilities resources to our student body. • Understand how certain student facilities needs may be underserved. • Increase the overall student experience as it relates to design studio and teaching culture.	• The administrative assistant of department meets with the facilities Director of Operations and Planning and student studio representatives to assess working conditions and facilities resources.

Development

Priorities FY23	Expected Performance	Self-Assessment
Successfully raise $5M to complete fundraising for Weitzman Hall; by September 2022, evaluate the possibility of raising a total of $8.5M to increase the scope of the project.	• Work strategically through the pyramid of potential donors to secure gifts for the project.	• Weitzman has successfully raised $5,000,110 towards Weitzman Hall; the Assistant Dean for Development is currently speaking with prospects about additional gifts to help the School replenish the funds borrowed from the University (which were initially allocated towards fellowships).

Increase funding for student financial aid.	• Raise $150,000 - $200,000 through the Weitzman School Awards event,	• The School raised nearly $85,000 from the Weitzman School Awards event held in New York City on February 21.

Academic Programs

Priorities FY23	Expected Performance	Self-Assessment
Develop a strategy for increasing online and remote learning offerings, particularly executive education programs	• Implement 1-2 new online executive education programs using a model similar to the executive program in social innovation design (XSD), including one focused on Design Leadership and one focused on Sustainability. • Develop plans to launch Weitzman Online Design Education Initiative	• In February 2023, Weitzman launched its second online executive education program in Design Leadership (XDL), a six-month, 4-course hybrid program (asynchronous lectures with a live online convening) for design professionals. • Weitzman has developed a draft strategic plan for launching a new online and in-person design education initiative – WeitzmanX – to make design education more accessible, extend the reach and impact of design, and help advance the careers of design professionals. The School hired a Director of Online Innovation in January 2022 to assist with this initiative.
Transition the *program* in Historic Preservation Program to an academic *department*	• Submit a formal proposal to the Provost's Office, Academic Planning & Budget Committee, and the University Trustees.	• A proposal to transition the Graduate *Program* in Historic Preservation to a *Department* was approved by the Academic Planning & Budget Committee and will be reviewed by the University Trustees at the June 2023 Meeting.

Integrating Knowledge

Priorities FY23	Expected Performance	Self-Assessment
Develop additional online executive programs to extend the School's reach and diversify revenue	• Explore the feasibility of developing additional online executive/continuing education programs, including programs in design leadership, green building design, ecological	• In February 2023, Weitzman launched the Executive Program in Design Leadership (XDL), the second online executive program in Weitzman's portfolio.

	planning, data analytics, data visualization, etc.	
Participate in high-priority cross-school initiatives	• Continue renting space at the Pennovation Center to support initiatives focusing on research in advanced fabrication techniques. • Advance the visibility of the importance of design in energy policy and science.	• Weitzman is in the process of expanding our footprint at Pennovation to better support the Research of Assistant Professor Masoud Akbarzadeh, who received a $2.4M award from DOE. The expanded Polyhedral Structures Lab will occupy warehouse space in Building 410 at the Pennovation Center. • .

Other

Priorities FY23	Expected Performance	Self-Assessment
Increase the diversity of the Board of Advisors and Dean's Council	• Add another African American, female, and/or person from Asia to the Board of Advisors and Dean's Council.	• In the past year, Weitzman has added two Asian Americans and an African American to the School's Board of Advisors.
Complete design documents for Weitzman Hall.	• Complete schematic and design documents.	• In the past year, Weitzman has added two Asian Americans and an African American to the School's Board of Advisors.

5.2.4 Strengths, challenges, and opportunities faced by the program as it strives to continuously improve learning outcomes and opportunities.

Program Response:
The strength of Weitzman Architecture's design sequence continues under the direction of new chair Rosanna Hu. Since 2022, various studios and courses are being evaluated and improved based on both shared goals and learning outcomes. In response to this challenge, the faculty implemented in 2023 an "assessment and outcomes" document for design studios and courses that meet Student Criteria 5 and 6. Technology aspects of the program remain foundational to the curriculum and are further strengthened by new tenure-track faculty who through innovative teaching and the research that they direct allow Penn to engage topics and challenges of 21st century practice.

The department believes we have addressed deficiencies pertaining to Non-Western History and Theory topics, with student outcomes evaluated at the end of this academic year. We acknowledge that issues pertaining to the cost of education, and other financial burdens on our students persist and can detract from their learning experience at Penn. Controlling the cost of attending the M. Arch program remains a paramount concern. The school continues to find opportunities for financial and other assistance to our students while also seeking ways to limit "out of pocket" expenses while increasing opportunities for our students.

5.2.5 Ongoing outside input from others, including practitioners.

Program Response:
The Dean's Council at the University of Pennsylvania Stuart Weitzman School of Design brings together Penn alumni who wish to build on the School's legacy of excellence through initiatives related to our students' education, alumni engagement, career development, volunteer recruitment, and fundraising.

Members of the Dean's Council provide critical support to the Weitzman community and act as ambassadors of the School. Members serve as advisors to the Dean of the School and School Leadership, as needed. The collective intellectual, financial, and advisory support of the Council allows for the continued growth and development of the School's programs and, ultimately, its regional, national, and international profile.

Additionally, the department enjoys input on student projects from a variety of rotating jurors made up of alumni, local professionals, international architects from our global network, and faculty from feeder schools. These ensure a diverse perspective is conveyed to our students and department.

The program must also demonstrate that it regularly uses the results of self-assessments to advise and encourage changes and adjustments that promote student and faculty success.

The department's performance is continually reported to the Dean's office for review. Within the department there are continuous reviews among the faculty and staff. Individual faculty members prepare an annual report summarizing academic, research, and professional practice endeavors and achievements of the past year. The students participate in town halls, student surveys, and course reviews, as well as office hours with the Chair. Admissions, Human Resources, and the Registrar all prepare reports based on data collected from students, faculty, and applicants. These reports are then assimilated into the department's goals and the school's strategic planning initiatives, which directly inform the priorities for expected performance and assessment and drive policy changes, as outlined above.

5.3 Curricular Development

The program must demonstrate a well-reasoned process for assessing its curriculum and making adjustments based on the outcome of the assessment.

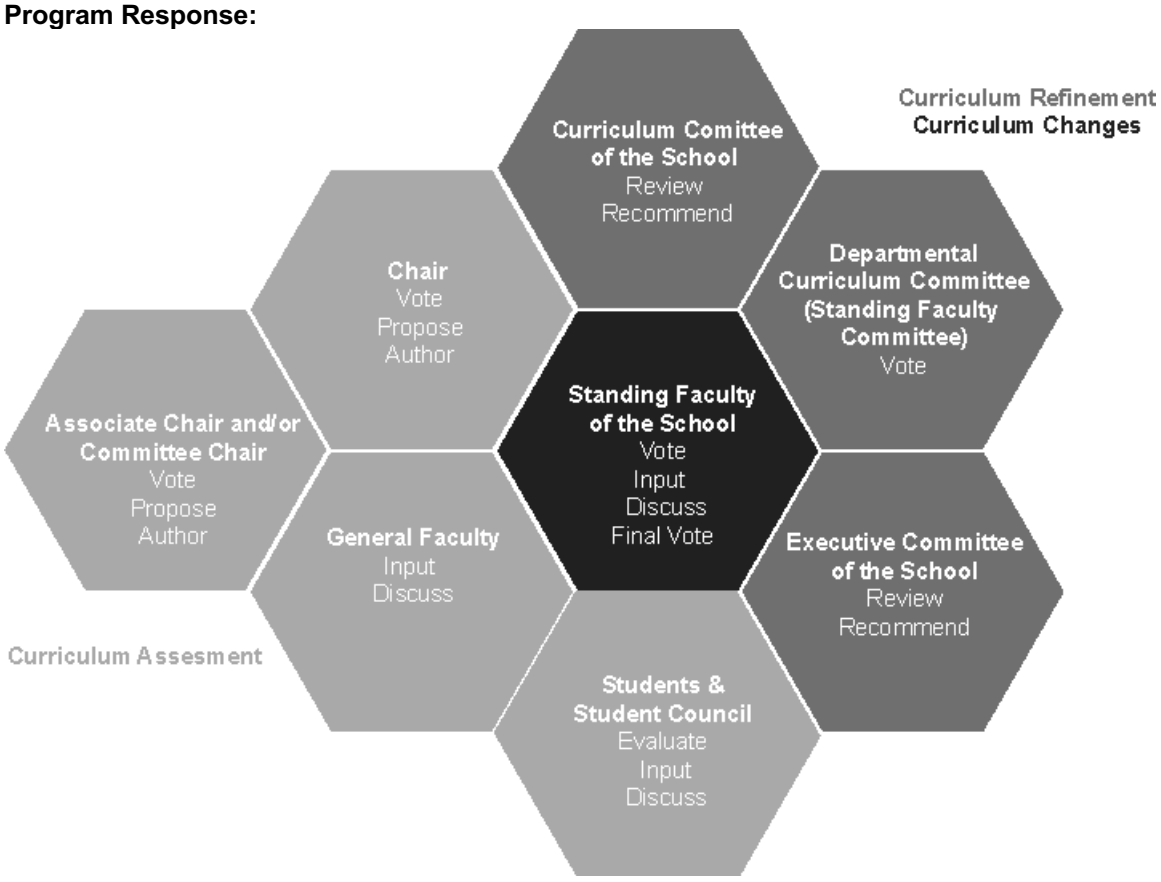
Programs must also identify the frequency for assessing all or part of its curriculum.

Program Response:

Weitzman Architecture's curricular goals are assessed during and after each semester, as well as each academic year as articulated in the following sections.

5.3.1 The relationship between course assessment and curricular development, including NAAB program and student criteria.

Program Response:



Changes to the MArch Curriculum

Changes to the MArch curriculum must advance through three stages before adoption into the curriculum. First, changes may be proposed by the Chair of the Department of other members of faculty leadership under advisement from the general faculty and the student body (through representation by Weitzman Student Council). Second, proposed changes are reviewed by the curriculum committee of the school (composed of all Weitzman Standing Faculty) and the Executive Committee of the School, who make recommendations to the departmental curriculum committee (composed of all Architecture Department Standing Faculty), who put the proposal to a vote. Finaly, successful proposals advance to a final vote of the Standing Faculty of the School (across all departments). For further elaboration of the roles involved in curricular development, please consult section 5.3.2.

The process for changing degree requirements to existing degree programs within Weitzman involves submitting the program proposal to the academic department for review and approval. Following approval, the proposal will be reviewed by Weitzman Senior Administrative Leadership to determine any impact on budget and resources. Following review and comment by the Weitzman Curriculum Committee, the changes will be reviewed and approved by the full Weitzman faculty. Required Review Materials include a support letter from Department Chair, a descriptive summary of the changes rationale for the changes that includes an explanation of the curricular issue(s) that the change is addressing, a summary of the impact on current and future students, and a detailed explanation of the impact on existing dual degree programs (internal & external), if applicable.

New Course Approval:
New course proposals are submitted to the Weitzman School Curriculum Committee after the course has been offered for one or two trial semesters. All courses for the spring term will be reviewed no later than the October meetings of the Curriculum Committee and Full Faculty. All courses for the fall term will be reviewed no later than the March meetings of the Curriculum Committee and Full Faculty.

An instructor wishing to propose a new course will draft a syllabus and seek approval from the Chair to trial the course as an elective offering. If approved for a trial, the process for the course being added to the curriculum involves offering the course initially as an elective, then submitting the course as a proposal to the Weitzman Curriculum Committee through the Department Chair, who may choose to first review and comment. The course will then go to a vote before the Curriculum Committee followed by a vote and approval by the full Weitzman School faculty.

Required material for review include a support letter from the Department Chair, course evaluation summary, course number, title and description, cross-list subjects (if applicable), syllabus, along with course requirements, credit units, format, and other pertinent information for the registrar.

5.3.2 The roles and responsibilities of the personnel and committees involved in setting curricular agendas and initiatives, including the curriculum committee, program coordinators, and department chairs or directors.

Program Response:
The Standing Faculty of the Department of Architecture**,** who together compose the curriculum committee for the department, vote on the adoption of proposed curriculum changes. Successful changes then move to the Standing Faculty of the School for a final vote.

The Standing Faculty of the School (across all Weitzman departments) may review and make recommendations to the curriculum committee of the department on proposed changes and make a final vote on the proposals if approved by the curriculum committee.

The Executive Committee of the School (see section 5.1.2) may review and make recommendations to the curriculum committee of the department on proposed changes.

Director of M. Arch Program: Associate Professor Andrew Saunders
Appointment and Responsibilities of the M. Arch Program Director:

1. The Program director is appointed from the Tenured Faculty by the department chair on an annual basis for a period of up to five years.
2. Under the direction of the department chair, the program director will regularly meet with the design-studio coordinators and those faculty members teaching required subjects (i.e. technology, history & theory, and visual studies) in order to maintain a balanced and productive integration of subjects.
3. With respect to teaching assignments, the program director discusses staffing recommendations and issues with the studio coordinators and the chair. The director also monitors teaching effectiveness and reports to the department chair. Lastly, the director advises the department chair on opportunities for faculty development.
4. The program director chairs the awards committee.
5. The program director assists the coordinators in arranging and staffing design-studio juries in coordination with the chair.

Department Committee of Post-Professional Programs (CoPPP): Professor Ali Rahim (Director MSD-AAD), Professor Bill Braham (Director MSD-EBD), and Assistant Professor Robert Stuart-Smith (Director MSD-RAS)

The Standing Faculty of the Department of Architecture propose to establish a Standing Committee of program directors to coordinate the activities of the Master of Science in Design (MSD) programs within the Department. The committee also includes the Chair of the Graduate Group that administers the MS and PhD in Architecture. See below for appointment and responsibilities of program directors and graduate group chair.

The responsibilities of the committee are as follows:

1. Review and coordinate individual program goals and strategic planning, including meeting of admission and diversity targets,
2. Review and coordinate curricular initiatives and proposals for new post-professional programs,
3. Review and coordinate publication and promotion of programs within the established budget,
4. Review and coordinate activities, events, reviews, and reviewers.
5. Review and coordinate policies and opportunities for student advising, teaching, and internships,
6. Meet with the department Chair during the first month of each spring semester to discuss program initiatives and budget proposals for the following academic year,
7. Review and coordinate research and fund raising related to program initiatives.

Responsibilities of Committee Chair
A committee chair will be selected by the Department Chair on a year- to-year basis. The Chair is responsible for planning committee meetings, preparing and distributing minutes of meetings, and distributing material to the committee members, particularly agendas before a meeting. The Chair reports to the Department Chair.

Appointments & Promotions Committee of the Department: Professor Ali Rahim (Design), Professor Bill Braham (Technology) and Professor Fernando Lara (History& Theory)
The Department of Architecture's Appointments & Promotions Committee is an advisory committee to the Department Chair. This committee is composed of three tenured full faculty members, representing one from each of these areas: design, history/theory, and technology. The committee assists with managing and preparing candidate materials for the department review of standing and associated faculty positions. The committee serves as a deliberative group for suggesting and soliciting external reviewers, as well as communicating discipline-specific standards.

The committee provides a careful reading of the dossier summarizes a candidate's work in the context of the field, and generally comments on the trajectory represented by the candidate's professional and/or scholarly career. The Committee briefs the Department Chair and submits its findings in written form prior to the meeting where the Committee Chair presents the material to the department faculty for deliberation and voting on the case. The results are recorded in the final committee letter delivered to the Department Chair, who prepares a cover letter with an independent recommendation and conveys the case to the school personnel committee.

The committee also researches and presents recommendations to the Chair regarding departmental teaching needs and potential new candidates for standing and associated faculty positions. Committee members research and present options to help build a more diverse and inclusive faculty by guiding the mentoring program and advising Assistant and Associate Professors.

Department Technology Committee: Associate Professor Franca Trubiano (Chair), Assistant Professor Dorit Aviv, Assistant Professor Robert Stuart-Smith, Adjunct Professor Richard Farley, and Senior Lecturer Philp Ryan.

The committee is composed of core Technology faculty teaching ARCH 5310, 5350, 5320, 5360, 6310, 6330, 6360, 6710, and 7710, and prioritizes the M. Arch core technology sequence as a cohesive set of core courses with well-defined learning outcomes. In addition, the committee assesses how Technology is addressed in extracurricular arenas including electives, lecture series, publications, and the department website.

Department History and Theory Committee: Adjunct Professor Joan Ockman (Chair), Professor Fernando Lara, Assistant Professor Daniela Fabricius, Assistant Professor Vanessa Grossman

The charge of the committee focuses on the representation of History and Theory in curriculum, especially as the department prepares its NAAB Architecture Program Report (APR). The committee is composed of core History and Theory faculty teaching ARCH 5110, 5120 and 6110. The committee prioritizes the M. Arch core history sequence as a cohesive set of core courses with well-defined learning outcomes. In addition, the committee assesses how History and Theory is addressed in extracurricular arenas including electives, lecture series, publications, and the department website.

Design Studio Coordinator's Committee: Daniel Markiewicz, Annette Fierro, Hina Jamelle, Nathan Hume, and Ferda Kolatan.

The Design Studio Coordinators Committee meets with the Director of the M. Arch program monthly and is composed of the studio coordinators for each design studio ARCH 5010, 5020, 6010, 6020, 7010, and 7040. The group focuses on the circular thrust of each design studio and its relationship to other studios in the context of the M. Arch program. In addition, the committee assesses how the design studio sequence is addressed in extracurricular arenas including electives, lecture series, publications, student recruitment, and the department website.

Department Diversity, Equity, and Inclusion Committee: Simon Kim (Chair), Ezio Blasetti, Hina Jamelle, Eduardo Rega Calvo, Andrew Saunders, Danielle Willems

In consultation with the Department Chair, the committee coordinates with and serves on the existing school-wide diversity and inclusion committee under the guidance of Karyn Tufarolo. Its work includes increasing visibility of the Department in order to increase diversity in student applications and admissions and engaging local stakeholders including the City of Philadelphia and AIA Philadelphia to:

1. Work with community leaders to generate a proposed plan to actively engage the Department and students,
2. Make recommendations to the Department Chair on issues related to equality and diversity in new elective courses, studio topics, and curriculum revisions,
3. Make recommendations to the Department Chair on new faculty hires, including part-time lecturers and instructors and full-time, tenure or tenure-track positions.

Weitzman Student Council (StuCo, see section 1) may advise Chair of the Department on proposed curriculum changes, and represent students in discussions of curriculum changes through evaluation and input of proposals to the committees involved.

5.4 Human Resources and Human Resource Development

The program must demonstrate that it has appropriate and adequately funded human resources to support student learning and achievement. Human resources include full- and part-time

instructional faculty, administrative leadership, and technical, administrative, and other support staff. The program must:

5.4.1 Demonstrate that it balances the workloads of all faculty in a way that promotes student and faculty achievement.

Program Response:
Chris Cataldo, Weitzman Director of Finance, is responsible for the School's Human Resources and reports directly to the University's Office of Human Resources.

Becoming a member of the Standing Faculty of the University implies a willingness to accommodate oneself to the reasonable scheduling of courses, laboratories, faculty meetings, and committee assignments. Faculty members are expected to be available for advising and individual student conferences throughout the term by means of regularly scheduled office hours or appointments or both unless prevented by conflicting professional activities. Moreover, faculty members are also expected to be easily available to their colleagues. Only compelling personal or professional reasons should prevent faculty members from holding all classes at the scheduled times and places.

Weitzman faculty work together each semester to track assignments, exams, and review dates in order to facilitate student work effort among course responsibilities and allow students to be successful in their courses each semester.

Appointments are made to the Standing Faculty of teacher-scholars whose research and publications are expected to continue throughout their active careers. Teaching loads at the University of Pennsylvania generally reflect the assumption that a significant part of the faculty member's time will be devoted to research.

5.4.2 Demonstrate that it has an Architect Licensing Advisor who is actively performing the duties defined in the NCARB position description. These duties include attending the biannual NCARB Licensing Advisor Summit and/or other training opportunities to stay up-to-date on the requirements for licensure and ensure that students have resources to make informed decisions on their path to licensure.

Program Response:
The department's NCARB Licensing Advisor, Philip Ryan, RA, serves as an information resource for licensure candidates and architects on the path to licensure, providing guidance within the context of state regulatory requirements, reciprocity, and NCARB certification. The Licensing Advisor participates in the Architect Licensing Advisors Community's annual meeting and provides feedback to the faculty and student body. Each year, the department hosts a school-wide lunch lecture in Meyerson Hall that is coordinated with the required Construction I (ARCH 531) and Professional Practice II (ARCH 771) lecture courses.

5.4.3 Demonstrate that faculty and staff have opportunities to pursue professional development that contributes to program improvement.

Program Response:
<u>Scholarly Leave</u>
It is appropriate that members of the Standing Faculty, Standing Faculty, and full-time Research Faculty periodically be granted scholarly leaves for study and research. A scholarly leave is a means of recognizing a faculty member's high academic performance while at the University, future potential for growth, and an opportunity to make a major contribution to knowledge. It is intended to extend and to accelerate intellectual growth and to enable a faculty member to pursue without distraction a project designed to this end including the

advancement of personal knowledge or competence in the faculty member's current or potential areas of specialty.

A scholarly leave is also intended to benefit the general academic community and the University. A scholarly leave is granted only to a faculty member who has presented an appropriate private program of study or research. It is recognized, however, that scholarly leaves for faculty members in the arts and professions can be based upon programs designed to increase professional competence even though these may not normally be interpreted as research programs.

Research Funding
The Office of the Vice Provost for Research manages a number of internal funding opportunities on behalf of the University as well as access to external funding opportunities. This includes the University Research Foundation (URF), which is an internal funding program that supports the research mission of the university. Its goals are to support faculty as they start their careers, to help established faculty pivot into new research directions, to compete for external funding, and to facilitate collaborations across disciplines. The University maintains many other internal research grant programs and robust databases of external funding opportunities for faculty research and development.

5.4.4 Describe the support services available to students in the program, including but not limited to academic and personal advising, mental well-being, career guidance, internship, and job placement.

Program Response:
Academic Advising
Every student in the Master of Architecture program is assigned a faculty advisor which they keep for their stay at Weitzman. Faculty advise on academic affairs and/or refer students for other health, mental welfare, career advising and financial issues to respective entities: the Director of Student Affairs, Student Health and Counseling, the registrar, and the financial aid officer. Students are free to consult with their advisor on a one-on-one basis by request. To encourage acquaintance/interaction, special interactive events have been added this year for each year of study, after a survey of students in 2022 indicated that they were not aware of the service.

Dean's Office and Student Services
The Student Life and Student Support services are led and executed by the Director of Student Services. The Director works closely with the Dean, Vice Dean, department chairs, faculty, and Weitzman staff to (1) develop and implement strategies, programs, staff and faculty trainings, and other initiatives to maximize student retention, foster a positive student experience, and create an environment in which students can thrive academically, socially, and emotionally, (2) respond to all student affairs related issues including serving as the primary contact for students needing student intervention services or other resources and supports, (3) manage all student-focused special events and student life activities (e.g. Commencement, New Student Orientation), (4) work closely with student groups to identify programming interests and needs and to support various student-driven initiatives, (5) collaborate with Student Counseling, Student Intervention Services (SIS), the Weingarten Center, Student Disability Services, Student Health Services, the Office of Community Standards and Accountability, etc. to connect students with relevant campus resources and successfully resolve a wide range of complex student related issues and challenges, (6) manage a variety of communications to students and oversee the Student Services section of the Weitzman School website, (7) develop, conduct and analyze student satisfaction surveys. Use feedback from the surveys to make schoolwide improvements, develop new programs, and address student concerns.

Student Health and Counseling

Student Health and Counseling is the primary care and psychological care division of Wellness at Penn. Our state-of-the-art medical and counseling centers are designed to provide high-quality, compassionate care for undergraduate, graduate, and professional students during their academic journey. Student Health and Counseling is committed to providing safe, accessible, cost-effective, culturally sensitive, and student-focused care. Our team provides care for acute and chronic health problems, preventative health services, as well as mental health and counseling, crisis management, and consultations.

Career Services

Professional Development and Career Services are led and executed by the Director of Professional Development and Leadership. The Director works in partnership with Penn Career Services, the Dean, Vice Dean, department chairs, faculty, and Weitzman staff to (1) connect Design students with alumni for internships, residency programs, and employment opportunities, (2) organize events and programs to help students develop their professional development leadership and public speaking skills, (3) coordinate networking events and portfolio reviews with alumni, faculty, and industry professionals, (4) schedule studio visits to firms and organizations in the tristate area to learn more about what they do and hear firsthand career planning advice, (5) manage the Professional Development and Career Resources web page and blog that includes career exploration resources and links to available jobs and internships, (6) manage the Weitzman School Externship Program

Weingarten Center (academic support and disability services)

The center provides learning consultations, tutoring, and interactive programs to support students as they develop learning strategies and content knowledge to further their academic and professional goals. We also provide comprehensive, professional services and programs for students who self-identify with disabilities to ensure equal academic opportunities and participation in University-sponsored programs.

University Cultural Resource Centers:

African American Resource Center serves to enhance the quality of life for students, staff, and faculty at Penn, with a particular focus on those of African descent.
Greenfield Intercultural Center promotes intercultural awareness and cultural competency workshops to help prepare Penn students to be thoughtful global citizens and leaders.
La Casa Latina focuses on building a unified community by working with the Latino Coalition, LaGAPSA, students, faculty, staff, and alumni.
The LGBT Center offers educational programs and mentoring, works with and supports student organizations-including Lambda Grads and other queer graduate and professional student groups. The center also co-sponsors QPenn (an annual pride week in March) and offers free printing.
Makuu, the Black Cultural Center, serves as a cultural hub for campus activities, activism, and personal, professional, and academic growth in order to increase resources and connections to the Penn community.
Pan-Asian American Community House (PAACH) is a hub of academic, personal, and professional growth for Penn students interested in Asian American culture and the Asian American Diaspora.
The Penn Women's Center aims to understand and address the continuing and evolving needs of all women at Penn.

Other Resource Centers:

The Family Resource Center provides a hub for information, resources, activities, and advocacy for students with children.
The Graduate Student Center coordinates a variety programs and events that promote a vibrant, engaged, and supportive graduate and professional student community at Penn.

The Office of Student Affairs (OSA), within VPUL, is a primary source of information and advice for students regarding campus co-curricular opportunities and resources.
International Student and Scholar Services
International Student and Scholar Services (ISSS) aims to provide immigration assistance as well as a sense of community for the international population at Penn.

5.5 Social Equity, Diversity, and Inclusion

The program must demonstrate its commitment to diversity and inclusion among current and prospective faculty, staff, and students. The program must:

The University of Pennsylvania Stuart Weitzman School of Design is committed to creating an educational setting in which all students, faculty members, and staff members are valued. We strive to create an inclusive culture that celebrates difference and is strengthened by contributions from people of all races, religions, countries of origin, genders, ages, sexual orientations, physical abilities, learning differences, and socioeconomic backgrounds. We aspire to support and retain a student body, faculty and staff who are representative of the multiple communities and publics with which we collaborate and work. A diverse community here enhances our ability to prepare the next generation of artists, architects, landscape architects, planners, and preservationists to become leaders and innovators in a multicultural society.

5.5.1 Describe how this commitment is reflected in the distribution of its human, physical, and financial resources.

Program Response:
The Stuart Weitzman School of Design at the University of Pennsylvania has a longstanding commitment to cultivating an environment that celebrates and promotes diversity, champions social equity, and is inclusive of all members of our community. While *diversity* is about representation (are there enough people from different backgrounds here?), *inclusion* is about action (what can we do to make people with different identities feel welcome?), and *equity* is about giving everyone access to the same opportunities (recognizing that some members of our community experience unfair advantages or barriers), creating a sense of *belonging* means that *everyone* in our community feels valued and is not afraid to ask questions or raise issues.

Weitzman maintains its abiding commitment to recruiting the most talented, creative, and diverse students, faculty, and staff to join our community. Through assertive outreach and partnerships with minority serving institutions, Weitzman has continued to increase the percentage of BIPOC faculty members and students. The Department's DEI Committee has been working to increase the diversity of the faculty and the study body (see section 3, PC.8). The committee members are all current Department faculty: Simon Kim (chair), Andrew Saunders, Hina Jamelle, Annette Fierro, Daniela Fabricius, Eduardo Rega.

In affirming justice and belongingness, Weitzman is committed to becoming more culturally welcoming, socially accountable, and intellectually transformative by (1) educating current students, faculty, and staff about harmful biases that exist within our community while celebrating the School's growing diversity; (2) addressing structural barriers to empowerment within the School for current BIPOC, first-generation, and international students while recruiting more under-represented students; (3) reviewing and restructuring our curriculum around justice and increasing interactive programming focused on belongingness while hiring more faculty and staff innovating within these interests.

We believe these strategic areas will take us beyond the necessary foundational focus on diversity, equity, and inclusion to "co-design" an elsewhere that is up to the challenges that remain with us individually and institutionally.

5.5.2 Describe its plan for maintaining or increasing the diversity of its faculty and staff since the last accreditation cycle, how it has implemented the plan, and what it intends to do during the next accreditation cycle. Also, compare the program's faculty and staff demographics with that of the program's students and other benchmarks the program deems relevant.

Program Response:
The University of Pennsylvania values diversity and seeks talented students, faculty and staff with diverse backgrounds, experiences, and perspectives. The University of Pennsylvania is an equal opportunity and affirmative action employer. Candidates are considered for employment without regard to race, color, sex, sexual orientation, gender identity, religion, creed, national or ethnic origin, citizenship status, age, disability, veteran status or any other legally protected class.

Specific objectives, KPIs, and means of self-assessments for diversity-related goals are outlined in section 5.2.3. Please refer to our plans and performance relating to the priorities of "increase the percentage of underrepresented minority (URM) and female standing faculty," "increase the number of URM students and provide additional support for current URM students," and "increase the diversity of the Board of Advisors and Dean's Council," among others.

5.5.3 Describe its plan for maintaining or increasing the diversity of its students since the last accreditation cycle, how it has implemented the plan, and what it intends to do during the next accreditation cycle. Also, compare the program's student demographics with that of the institution and other benchmarks the program deems relevant.

Program Response:
Admissions
The application and admissions process is coordinated by the Weitzman Office of Admissions. Applications are collected and passed to department committees, comprising faculty, and coordinated by faculty director Annette Fierro. Applicants' portfolios are reviewed and scored by teams of faculty; these scores are averaged against students' grade point averages to produce a ranked list. After reviewing recommendations and personal statements, this list is finalized, which forms the basis for financial merit awards. Special attention is given to students who evidence the possibility to bring diversity to the school. During the fall, the faculty director leads a large outreach program to identify schools of special interest and special diversity of students, organizing special presentations. In the spring, faculty members personally contact the top applicants. Two Open Houses are held, one in the fall, which is virtual, and one in-person in the spring for applicants who have been accepted in the program. The Admissions office keeps extensive records, from data of applicants versus matriculants, to surveys taken by Open House attendees and by those who matriculate into the program. We adjust our process every year according to this data.

The Weitzman School has hired a new Director of Diversity, Equity, Inclusion, and Belonging who will begin on March 1, 2024. The new Director will work with the School's Office of Admissions and key faculty to develop and implement recruitment strategies to attract students from varying backgrounds with diverse life experiences and perspectives. The new Director will help build and nurture relationships with external colleges and universities (including HBCUs and HSIs), communities, and professional networks, and assist with other assertive outreach and recruitment strategies. Relationships with other colleges and universities might include joint projects, workshops, or studios. The DEIB Director will also meet regularly with current Weitzman students to better understand how to increase student diversity, he will establish a team of Weitzman Admissions Ambassadors to assist with recruitment at key Minority Serving Institutions (MSI's).

5.5.4 Document what institutional, college, or program policies are in place to further Equal Employment Opportunity/Affirmative Action (EEO/AA), as well as any other social equity, diversity, and inclusion initiatives at the program, college, or institutional level.

Program Response:
The Weitzman School has a longstanding commitment to cultivating an environment that celebrates and promotes diversity, champions social equity, and represents all the communities our professions serve. We have made great progress over the past several years in increasing the diversity of our faculty, staff, and students, and of the School's curricula and academic programming.

Despite the School's recent progress in increasing the number of students and faculty members of color, additional initiatives are required to continue this positive trend. Some examples include: (1) increasing student fellowships, (2) continuing to review curriculum and programming to ensure that they reflect diverse perspectives, (3) helping create a culture of inclusion and belonging, and (4) establishing closer partnerships with feeder schools and minority-serving institutions as pipelines for both faculty and staff.

The Weitzman School of Design is committed to cultivating an environment that celebrates and promotes diversity, champions social equity, and is inclusive of all members of our community. Our pursuit of diversity, equity, and inclusion (DEI) is framed in terms of nurturing a greater sense of justice by planning to make structural changes that ensure everyone in our community has access to equal opportunities and that everyone in our community knows that they belong.

While diversity is about representation (are there "enough" people from different backgrounds here?), inclusion is about action (what can we do to make people with different identities feel welcome?), and equity is about giving everyone access to the same opportunities (recognizing that some members of our community experience unfair advantages or barriers), creating a sense of belonging means that everyone in our community feels valued and is not afraid to ask questions or raises issues.

The Weitzman School Justice and Belonging (JxB) Initiative invites students, faculty, and staff from all over the world to become more aware of their power as learners, educators, and facilitators to make design justice a central motivation for the Weitzman community. We are working to create a shared understanding of how to undo and unlearn the systems of oppression by focusing on our curriculum, community engagement, and culture. Recent examples of JxB initiatives include (1) reviewing and restructuring curricula within the school to represent more diverse perspectives and creating courses focused on decolonization, diasporas and more, (2) educating students, faculty, and staff about harmful biases that exist within our community, (3) hiring more diverse faculty and staff, and recruiting students with varying backgrounds, experiences, and perspectives, (4) partnering with communities across the region to implement neighborhood improvement initiatives, promote greater equity, and reduce systemic racism embedded in uneven distributions of public resources and power, under-achieving buildings and spaces, and erasures, (5) increasing programming focused on equity and inclusivity, (6) through these and many other efforts we strive to become more culturally welcoming, socially accountable, and intellectually transformative.

The Office of Affirmative Action and Equal Opportunity Programs is charged with ensuring that the University meets its obligations as an affirmative action and equal opportunity employer and educational institution. The Office is responsible for implementing and advocating University policies, procedures, and priorities and helping realize its vision of a respectful, diverse and inclusive community. To fulfill its mission, the Office carries out a number of activities and services in collaboration with University administrators, faculty, staff and students.

The Office works in close collaboration with the Division of Human Resources on issues related to equal opportunity, affirmative action and diversity for staff and applicants for employment. The Office also works in close collaboration with the Office of the Provost on issues related to increasing the diversity of Penn's faculty.

5.5.5 Describe the resources and procedures in place to provide adaptive environments and effective strategies to support faculty, staff, and students with different physical and/or mental abilities

Program Response:
The Weingarten Center serves as Penn's Home for Academic Support & Disability Services
Academic Support includes learning consultations, tutoring, and interactive programs to provide support as students develop learning strategies and content knowledge to further academic and professional goals. Learning Consultations provide professional instruction in university-relevant skills such as academic reading, writing, study strategies, and time management. Tutors offer Penn undergraduate students free, accessible, and convenient options to complement their in-class learning. Workshops and Programs offer learning strategies and tutoring workshops throughout the academic year in partnership with students and colleagues. Study Tools and Strategies includes learning specialists who have developed helpful resources to support student's learning. Resources for Online Learning can assist students as they navigate both synchronous and asynchronous coursework. Peer Educators are Penn students who seek to use their knowledge and experience to support their peers. The Weingarten Center provides services for students who self-identify with a disability in order to ensure equal access to all University programs, activities, and services. The process begins when a student requests accommodation, provides documentation of their condition, and meets with a Disability Specialist. Students who receive accommodations work with the Disability Services staff to coordinate their academic accommodation as well as accessible housing, dining, communication, and technology. Through ongoing collaboration with the Weingarten Center, students learn to identify and utilize individualized accommodations and strategies that support their full participation in university life. Faculty and Staff work in partnership with the Weingarten Center as it provides Penn students with high-quality and timely academic support and disability services. The Weingarten Center provides resources for professors to build syllabus statements, Canvas pages, tutoring resources, and learning strategy supports into their courses and on how to work with Disability Services.

5.6 Physical Resources

The program must describe its physical resources and demonstrate how they safely and equitably support the program's pedagogical approach and student and faculty achievement. Physical resources include but are not limited to the following:

5.6.1 Space to support and encourage studio-based learning.

Program Response:
Studios and Review Spaces
Meyerson Hall, the primary building of the Weitzman School of Design, sits at the southwest corner of Walnut and 34th Streets, along the diagonal Woodland Walk, which leads directly to College Green, the center of the Penn campus. Meyerson Hall contains major meeting places for all the programs of the Weitzman School as well as the primary studio locations; seminar rooms; fabrication, conservation, and computer labs; the administrative areas for the School, the Departments of Architecture, City Planning, and Landscape Architecture, and the Historic Preservation Program. Across Meyerson Plaza to the south stands the Frank Furness Fine Arts Library, now named Fisher Fine Arts. The Furness building also houses the Louis Kahn

Apse (now the home of the Kleinman Center for Energy Policy), the school's Architectural Archives, classrooms, meeting spaces, and additional faculty offices.

Architecture studios for the three years of MArch study occupy the east and west wings of the second and third floors. All studios in Meyerson provide an individual 3'x5' workspace for each student. On the second and third floor each workspace has a desk and storage cabinet and an adjustable chair. Workspaces are provided with one computer networking outlet and access to electric power. Each studio section is equipped with an overhead projector, and lighting and computer connections for projection are distributed in each studio bay.
Formal mid- and final-project reviews occur in the three primary gallery spaces shared by the Weitzman School's five departments for exhibitions and reviews on the first floor: the Upper and Plaza (Lower) Galleries, as well as a space on the first floor called "Dean's Alley."
The transformed Stuart Weitzman Hall will provide much-needed teaching, making, and exhibition spaces.

5.6.2 Space to support and encourage didactic and interactive learning, including lecture halls, seminar spaces, small group study rooms, labs, shops, and equipment.

Program Response:
Classrooms, Shops, and Labs
Within Meyerson Hall, there are five lecture halls (B-1, B-2, B-3, B-4, and B-13) in the basement of Meyerson Hall with capacities varying from 45-406 seats. There are three seminar rooms (B-5, B-6, B-7) in the basement. All of the B-classrooms were upgraded with hi-resolution audio/visual equipment. B-4 & B-13 are additionally equipped with workstation tables for personal laptop hook-up. Three additional seminar rooms are available in the Fisher Fine Arts Library. Additional provisions and spaces can be utilized throughout the university campus.

The Weitzman School of Design's Computing Facilities (see https://www.design.upenn.edu/it/it-services) includes two dedicated instructional labs with 30 high end Windows work stations running various three-dimensional modeling and simulation software as well as various other CAD/design oriented titles including Autodesk and Adobe. The majority of this software is available either free or at significant cost savings for installation on student-owned computers. Specific advances prompted primarily by faculty have also increased the types of use of digital media within the department. A MakerBot suite located on the 2nd floor and 3D printers in the fabrication modeling shop work at a higher resolution than those placed in the studios, and the three laser-cutters are used throughout the department, particularly for model-building; the CNC milling equipment is used in specific courses.

The Weitzman School of Design's Fabrication Laboratory (https://www.design.upenn.edu/resources/fabrication-lab-0), which includes facilities for wood, metal and digital fabrication, is currently housed on the 4th level of Meyerson Hall. One large workshop space (Rm. 409) and an ancillary room for two laser cutters (60-watt) provide 3000 square feet of laboratory space. There is an additional room (Rm. 408) which houses four Forest Scientific 4' x 4' CNC Mills and vacuum forming machinery.

The lab is open to students pursuant to completion of a Risk Management Department-mandated safety course. There are two full-time staff members to assist students during normal hours (Mon-Thurs 8am-7pm / Fridays and 8am-4pm/ Saturdays and Sundays from 11am-6pm). During peak times, there are three staff members on duty. The CNC Mills and laser cutters are independently staffed as well during normal hours of operation.

The main laboratory space houses the following pieces of equipment:

(1) 10” table saw, (3) 17" wood bandsaws, (1) Powermatic belt/disc sander, (1) Powermatic wood lathe,(1) safety speed panel saw, (1) 8” jointer, (4) Oneida Dust Gorilla Pro, (1) tankless water heater, (1) 12" miter saw, (1) oscillating sander, (1) DoAll ferrous bandsaw, (1) 14” Powermatic non-ferrous band saw,(1) drill press, (1) 12" disc sander, (1) wall mount panel saw, (1) Marathon Vacuum Generator, (2) 12" x 42" knee mills, (1) Southbend engine lather, and (1) Sheldon bench lathe, (2) EcoGate Blast Gate Controllers, (1) Formech Vacuum Forming Machine, (4) ULS Laser Cutters, (1) Stratasys 3D Printer J55,(1) Stratasys 3D Printer F270, (4) Forest Scientific CNC Mill Spindle, (4) Forest Scientific CNC Mill Vacuum Tables, (1) Stratasys Waterjet Cleaning System, (1) 24" DiAcro Sheet Metal Shear, (1) 24" DiAcro Finger Brake, and (1) large format Techno-Iseo CNC (Computer Numeric Control) router. There is also a large assortment of hand and hand-powered tools for use by students in the shop.

Equipment in Labs

Meyerson 321 (Windows 10):

- Dell Precision 3660 workstations (20 student machines, 1 instructor/podium machine)
- Intel i9-13900K CPU (24 cores [8 P-cores + 16 E-cores], 32 threads, 3.00 GHz to 5.80 GHz, 36MB cache)
- NVIDIA RTX A5500 GPU (24GB GDDR6)
- 64GB DDR5 RAM
- Bluetooth
- Epson WorkForce DS-50000 large-format scanner (1)
- Epson Perfection V550 Photo scanners (4)
- Ceiling-mounted microphone
- Ceiling-mounted webcam

Meyerson 324 (Windows 10):

- Dell Precision 3660 workstations (8 student machines, 1 instructor/podium machine)
- Intel i9-13900K CPU (24 cores [8 P-cores + 16 E-cores], 32 threads, 3.00 GHz to 5.80 GHz, 36MB cache)
- NVIDIA RTX A5500 GPU (24GB GDDR6)
- 64GB DDR5 RAM
- Bluetooth
- Epson Perfection V550 Photo scanners (2)
- Ceiling-mounted microphone
- Ceiling-mounted webcam

4 Mac Labs, 1 PC Lab, 1 Digital Video Lab in Addams Hall, Silverstein Digital Projects Photography Lab in Weitzman Hall

Software in Labs

The computers in the Weitzman computer labs are loaded with over 90 software programs to aid in the production, processing, and publishing of digital design work. These software packages range from the Adobe, Microsoft, and Autodesk suites to CAD and BIM modeling software (including Rhino and Revit), to numerous render engines, to animation software, to physics, structures, and environmental simulation programs, to coding resources, to document processing software. Students may also license certain software products on their own devices, such as Rhino and the Adobe Creative Cloud, at significant discounts provided by the school, and some software, such as V-Ray and Keyshot, can be licensed for free by students on their own devices. For complete lists of the software products available on Weitzman computers and on student devices, please consult the following links: https://www.design.upenn.edu/it/lab-and-class-info, https://www.design.upenn.edu/it/software.

Printers and Plotters

Meyerson Hall

Meyerson Hall features an array of four LaserJet, Xerox, & Standard Copy printers available to students for printing, and eight plotters are available for large scale plotting. Between these plotter students can plot on uncoated, coated, photo satin, and polypropylene paper and film.

Printers and plotters are also stations in Weitzman and Addams Halls. Full descriptions of each printer and plotter, their paper type, and printing costs can be found at the following link: https://www.design.upenn.edu/it/printers-pricing.

Equipment Available for Checkout

- Laptops (for presenting only)
- Windows laptops, 4
- Mac laptop, 1
- Projectors
- Epson PowerLite 1795F (1920 x 1080), 4
- BenQ SH915 (1920 x 1080), 1
- Panasonic PT-VZ575N (1920 x 1200), 1
- Projector carts (comes with projector, laptop, speakers), 2 are available for use in Meyerson Hall with the exception of Lower Gallery, 1 is available to reserve in Morgan Building for use in the spaces on the 1st floor.
- TV carts
- 55-inch cart with onboard computer, 1 - Meyerson Hall Only
- 50-inch cart with onboard computer, 1 - Meyerson Hall Only
- 39-inch cart with no computer, 1 - Meyerson Hall Only
- Webcams
- Conference speaker/mics

Fabrication Lab Modifications,
The existing fabrication lab in Meyerson Hall requires modification of approximately 1,500 square feet to accommodate the expansion of their CNC, laser cutter and 3D printing facilities. The existing space configuration does not align with the program requirements. The equipment is not efficiently configured, within the lab area, to allow the addition of new equipment and would prevent the proper supervision of student activities and would compromise life-safety.

The scope of this renovation includes the following:

- Reconfiguration of select walls and ceilings to accommodate additional laser cutters.
- Reconfiguration of electrical distribution.
- Reconfiguration of HVAC distribution (including the replacement of an existing exhaust fan and installation of an additional rooftop exhaust fan.
- Installation of new sprinklers (inclusive of spray booth area) and renovation of the existing lab's fire alarm devices.
- Construction of a new code compliant egress corridor.
- Renovation of the CNC machine area to accommodate (4) 4'x4' mills.
- Construction of new loft storage area and Installation of fall protection for existing and new loft areas.

5.6.3 Space to support and encourage the full range of faculty roles and responsibilities, including preparation for teaching, research, mentoring, and student advising.

Program Response:
Offices
The Department's administrative offices are located on the 2nd floor of Meyerson Hall. Additional offices for standing faculty and lecturers are located in Meyerson Hall, and the upper On the first floor of Meyerson the School's administrative offices, the Dean and his staff, the Registrar, Student Services and Finance Office, and the Admissions and Financial Aid administrative offices, are located adjacent to the school's central gallery and exhibition spaces. The Architecture department office is located on the second floor near the first- and second-year studio spaces. The basement and ground floor levels contain seminar rooms,

lecture halls, and faculty and building staff offices. Studio spaces for Weitzman Architecture are located throughout the second and third floors. The Weitzman School's computing lab and support staff offices are located on the 3rd level. The fabrication shop is located on the fourth floor, east wing. Access to the Lower (main) exhibition area is through the front doors on the south side of Meyerson Hall. Access to elevators, and subsequently, to all parts of the building is via the loading dock doors on the northeast corner of the building.

Faculty Research Labs

Advanced Research and Innovation (Robotics) Lab

Innovation in the realm of fabrication in architecture and design has taken a dramatic shift in recent years due to the increasing accessibility of industrial robotic arms. Typically, in industrial manufacturing, robotic arms are equipped to complete one repetitive task. When deployed in creative industries such as architecture, they represent an entirely novel platform for multi-task and multi-axis fabrication. Unlike computer-aided manufacturing tools that are designed to do one operation, robotic arms provide up to seven degrees of multi-axis freedom and can be equipped with a limitless array of specialized tools. In addition to augmenting traditional subtractive techniques, including laser cutting and milling, robotic arms carry out contemporary automated modes of additive and formative manufacturing including, but not limited to, bending, folding, 3D printing and deposition, composite material filament winding, 3D scanning, real-time sensing, and much more. Access to robotic arm technology will enable designers to develop unique routines and customize material manipulation and transformation through an endless range of end effectors.

Polyhedral Structures Lab

PSL is at the intersection of architecture, structural and mechanical engineering, computer science, mathematics, and material science. It aims to bridge the gap between design and engineering by advancing structural geometry and reconciling function, form, technology, and energy. The PSL is directed by Assistant Professor Dr. Masoud Akbarzadeh.

PSL addresses pressing matters in the field of architecture engineering and construction. We particularly look into how we can (1) minimize mass in large-scale structures and thus contribute to the reduction of embodied energy; (2) design prefabricated systems for disassembly; (3) develop future manufacturing methods by tuning material properties; and (iv) design and construct structures that can absorb carbon in their lifetimes.

DumoLab

DumoLab Research at the University of Pennsylvania Weitzman School of Design started operations in 2022 and is directed by interdisciplinary architect Dr. Laia Mogas-Soldevila. Exploring materials as new design companions, the lab develops architectures that nurture both the human body and planet Earth with research areas including ambient-conditions manufacturing, augmentation of hyper-local material systems, environmentally interactive bio-composites, and inclusive and equitable material practices.
Support from: Johnson&Johnson Foundation, Canon Virginia Inc, Penn Research Foundation, Penn Global Engagement Fund GEF, Penn Environmental Innovation Initiatives EII, The Stephenson Foundation Bio-MakerSpace, The Sachs Program for Arts Innovation, Penn Center for Undergraduate Research & Fellowships.

Autonomous Manufacturing Lab

Led by Assistant Professor Robert Stuart-Smith, the Autonomous Manufacturing Lab (AML-Penn) explores the integration of design and production within robotic processes of building manufacturing. The economic and environmental cost of building is able to be reduced through increases in the intricacy and complexity of design and engineering solutions. This, however, is dependent on the design possibilities and production efficiencies of building manufacturing processes. Beyond industrial automation, autonomous and semi-autonomous manufacturing are able to provide embodied forms of decision making, providing new

opportunities for bespoke fabrication where adaptive processes can actively engage with the formation and physical manipulation of materials in novel ways. The interdisciplinary AML lab aims to develop innovative methods of manufacturing that leverage real-time robotics, computation, sensor and computer vision technologies within generative design processes, in order to expand the creative and practical possibilities of design through a direct engagement with the physical world of manufacturing.

Center for Environmental Building Design
The Center for Environmental Building + Design (CEBD) is a faculty research unit and consultancy at the University of Pennsylvania Weitzman School of Design dedicated to improving the environmental behavior and operation of buildings and cities. We work closely with the Thermal Architecture Lab and share a workspace in Meyerson Hall and a larger assembly and testing space in the Pennovation campus. The center seeks ways to reduce energy consumption in buildings by employing design-based methods to provide indoor thermal comfort and air quality. We research adaptive architectural technologies and construction materials that can reduce the energy consumption of building heating and cooling systems as well as the carbon embodied in their materials and construction. The CEBD is directed by Dr. William W. Braham, Professor of Architecture, who also serves as Director of the MEBD and MSD in Environmental Building Design.

Thermal Architecture Lab
The Thermal Architecture Lab focuses on the intersection of thermodynamics, architectural design, and material science. The Lab is directed by Assistant Professor Dr. Dorit Aviv. The building sector produces nearly 40% of total global CO2 emissions, and almost half of the direct energy consumption in buildings is due to mechanical heating, cooling and ventilation demand. As the master-builders in charge of building design from concept to construction details, architects can take an active role in the effort to make buildings more energy efficient. The Thermal Architecture Lab examines the building's form and materials from the perspective of thermodynamics, as active agents in the transfer of heat between the human body and its environment. We research novel technologies and design strategies to simultaneously reduce buildings' energy demand and provide thermal shelter to people in a warming world.

Baroque Topologies Lab
Associate Professor Andrew Saunders' research, Baroque Topologies: Digital Analysis of the Latent Topological Structure of Baroque Architecture, explores how emerging technology—including high-resolution 3D digital scanning and printing—provide unprecedented access to Baroque architecture's formal complexities, intricate detail, and deep topological structure. Professor Saunders field research in Rome and Turin, Italy documents the most significant Baroque works, will result in publication and a digital archive of his analysis, including high-resolution 3D scans and parametric models. This archive will be an extremely valuable worldwide resource for advancing contemporary teaching and research of the Italian Baroque, since no such digital archive currently exists.

Immersive Kinematics Lab
Immersive Kinematics is a research group directed by Simon Kim. This group is a unique team of engineering and design that expands the roles of architecture and engineering focusing on integrating robotics, interaction, and embedded intelligence in our buildings, cities, and cultures. In this capacity, new devices and new environments are continuously developed and deployed in the production of culture and art. The group has continually tested these prototypes within the domain of theatrical performance. Working with award winning organizations such as Pig Iron, Carbon Dance, The Dufala Brothers, Grace Kelly Jazz, and Opera Philadelphia, Immersive Kinematics has produced and designed multiple bespoke stage designs, nonhuman performers, and interactive instruments. With titles such as Nervous Matter, Music of the Planets, Orpheus and Eurydice, the collaborations have been

presented to the public at venues such as the Slought Foundation, Traction Company, and the Annenberg Centre.

5.6.4 Resources to support all learning formats and pedagogies in use by the program.

Program Response:

Kleinman Center for Energy Policy

The Kleinman Center's mission is to create the conditions for policy innovation that support a just and efficient transition to sustainable energy. Our vision is an energy system that optimizes productivity through smart demand, sustainable supply, and compensated externalities. We engage student learners by providing energy-related courses, a certificate program, lectures, internship opportunities, and grants for research and professional development. We support Penn research through competitive grants, seminars, and lectures. We also bring distinguished energy leaders and scholars to Penn for visits and residencies. We convene thought leaders with diverse interests from academia, industry, and government for productive conversations that lead to policy action. Key to our identity is our research agenda. It guides our projects, events, courses, and written work. Our research is timely, attracts and engages critical stakeholders, draws from the work of the University, and builds a diverse portfolio—by geography and energy sector.

Institute of Contemporary Art

The Institute of Contemporary Art at the University of Pennsylvania believes in the power of art and artists to inform and inspire. The ICA is free for all to engage and connect with the art of our time. A non-collecting museum, ICA is also one of the only kunsthalles in America. ICA exhibitions have aimed to bring under-recognized artists to the attention of the broader world. This was true in 1965 when we organized Andy Warhol's first ever solo museum show, helping propel him to superstardom; when we presented early shows of artists like Laurie Anderson, Richard Artschwager, Vija Celmins, Karen Kilimnik, Charles LeDray, Barry Le Va, Glenn Ligon, Robert Mapplethorpe, Agnes Martin, Damian Ortega, Pepon Osorio, Tavares Strachan, and Cy Twombly; and it remains true today.

Pennovation Center

The Pennovation Center is a university-wide business incubator and laboratory that aligns and integrates researchers, innovators, and entrepreneurs for the commercialization of research discoveries. Intended to marry entrepreneurs with an expert workforce and scientifically advanced facilities, key features of the Pennovation Center are the common creative spaces, including coworking areas, a cafe, and a venue for events and programs. There are Weitzman-specific labs at the center. Weitzman Architecture's footprint can be enlarged to accommodate any additional funded research.

Kelly Writer's House

Founded in 1995 by a group of students, faculty, staff and alumni, the Kelly Writers House is an actual 13-room house at 3805 Locust Walk on Penn's campus that serves as a center for writers of all kinds from Penn and the Philadelphia region at large. Each semester the Writers House hosts approximately 150 public programs and projects--poetry readings, film screenings, seminars, web magazines, lectures, dinners, radio broadcasts, workshops, art exhibits, and musical performances--and about 500 people visit the House each week.

Graduate Student Center

The Graduate Student Center provides a centrally located space to relax, eat lunch, and connect with other graduate and professional students from across the university. In addition to providing a central gathering and study space for students, the Grad Center holds hundreds of events each year designed to help students gain the skills, experiences, and community they need for a truly successful graduate experience.

Perry World House

Perry World House is a center for scholarly inquiry, teaching, research, international exchange, policy engagement, and public outreach on pressing global issues.
Perry World House's mission is to bring the academic knowledge of the University of Pennsylvania to bear on some of the world's most pressing global policy challenges, and to foster international policy engagement within and beyond the Penn community.

If the program's pedagogy does not require some or all of the above physical resources, the program must describe the effect (if any) that online, off-site, or hybrid formats have on digital and physical resources.

Program Response: N/A

5.7 Financial Resources

The program must demonstrate that it has the appropriate institutional support and financial resources to support student learning and achievement during the next term of accreditation.

Program Response:
Under Dean Steiner's leadership, the School's endowment grew from $80M in 2016 to $258.3M (as of 7/01/23), and it will continue to grow as existing commitments are realized. During the Power of Penn Campaign, the School created more than 40 new fellowships and more than doubled the average financial aid award per student. Weitzman also introduced new annual fellowships for continuing students, including the Kanter-Tritsch Prize in Architecture and the Witte-Sakamoto Family Prize in City and Regional Planning, which cover the bulk of tuition and fees for a student in architecture and city planning, respectively, for their final year of study. The student prizes are accompanied by a professional medal for a practicing architect and a plan, respectively. During the same period, the Weitzman School created seven new endowed professorship positions.

Over the past five years, the School has more than tripled sponsored research awards, with major grants from the National Science Foundation, the U.S. Department of Agriculture, the U.S. Department of Energy, the U.S. Department of Transportation, Federal Highway Administration, the Andrew W. Mellon Foundation, the Getty Foundation, the National Park Service, The Pew Center for Arts & Heritage, and others. Our Architectural Archives houses one of the most significant collections of original drawings and other materials by leading American architects and landscape architects to be found anywhere in the world and is a primary source for scholarship. The major vehicles for sponsored research are the School's 10 research centers; administrative support is provided by the Research Support Center, a three-person office which opened on a pilot basis in 2019. We appointed an associate dean for research in 2018.

Supporting exceptional students financially so they graduate with minimal student loan debt so as to have the freedom to pursue public-interest design and innovation continues to be one of our top goals. Although we have increased financial aid awards significantly during the Power of Penn Campaign, Weitzman Architecture cannot currently match the award packages offered by peer institutions for all of our top candidates; admitted students frequently report that Weitzman Architecture is their first choice but that they received more generous scholarships elsewhere. Additional support for student fellowships will enable the Weitzman School to continue to increase the diversity of the student body and attract the most promising applicants.

5.8 Information Resources

The program must demonstrate that all students, faculty, and staff have convenient and equitable access to architecture literature and information, as well as appropriate visual and digital resources that support professional education in architecture.

Program Response:

Fisher Fine Arts Library
Mia D'Avanza
Director, Fisher Fine Arts Library

The University of Pennsylvania Libraries builds, maintains, and preserves collections that now exceed 9 million volumes in print and electronic form. Through our collections and those of our partner institutions, Penn students and faculty have access to more than 272 million print and electronic collections items in more than 500 languages. The library system is comprised of nineteen physical libraries--including the Fisher Fine Arts Library (FFAL)--recognized for their extensive collections across all media. The management structure includes Vice Provost and Director of Libraries, who has ultimate oversight for Penn Libraries but has a series of directors in place who manage specific units and services on their behalf.

While the FFAL is one of the most popular places to study on campus, attracting students and scholars from across Penn and beyond, its primary focus is furthering the learning, teaching, and research of the of Design faculty and students along with the related certificate programs and dual degree programs with other departments. Specifically, FFAL supports degree programs in Architecture, City and Regional Planning, Fine Arts, Historic Preservation, Landscape Architecture, and Urban Spatial Analytics, and the Ph.D. programs in Architecture and City and Regional Planning. Equally as important to the FFAL is the Department of the History of Art that houses over ten areas of specialization including architectural history and theory. Both the Weitzman School of Design and the Department of the History of Art drive the collections and services within the FFAL.

In addition, with Van Pelt Library and the Penn Museum Library, FFAL supports the interdisciplinary Graduate Group in the Art and Archaeology of the Mediterranean World. Other centers and programs across the university -- including Classical Studies, Annenberg School for Communication, English, History, Middle East Center, School of Engineering and Applied Science, and Urban Studies use and rely on the resources of the Fisher Fine Arts Library.

Core functions of the FFAL include:

- Reference and consultation services are provided on site and via office consultations, email, online chat and Zoom.
- Collection development and management in various media including print books and periodicals, databases, e-journals, and e-books, and a growing collection of rare books and ephemera, expending approximately $720,000 per year in allocated funds and endowment income.
- Instruction and teaching activities including library orientations, research instruction, teaching with collections, workshops on image research and copyright, and support for scholarly publishing.
- Outreach to faculty and students through promotion of library resources and services, creation of Web-based content, participation in school culture and project reviews, and so forth.
- Offering 3D scanning and materials and image research through the Materials and Image Library.
- Opportunities to learn with letterpress and book-arts via The Common Press studio, a collaborative effort with Penn's Kelly Writers House and the Stuart Weitzman School of Design.

Facilities
The FFAL has approximately 20,000 square feet of usable floor space across four levels, and about 350 individual study seats including carrels for graduate students. The Fine Arts Library was listed in the National Register of Historic Places in 1985. Major restoration work, planned and directed by the firm of Venturi, Rauch and Scott Brown, was carried out from 1987 through 1990, with rededication taking place on the centennial of the original ceremony. In 1992 both the

building and the library were formally renamed the Anne and Jerome Fisher Fine Arts Library to honor the principal donors to the restoration project.

The FFAL rare books room, formally called the Perkins Rare Books Library, is a collection of monuments of architectural publishing located within the building's interior envelope. It houses the library's rare book collection, which consists of approximately three thousand rare books as well as drawings and historic maps. FFAL offers two seminar rooms for student and faculty use that accommodate up to 12 people and are equipped with a classroom PC, data projector, and a whiteboard.

Equipment
The computing and printing area on the library's first floor has desktop computers (both PC and Mac) that anyone with Penn credentials may log on and use. The area also has a photocopier, flatbed scanners, an overhead scanner, and black and white and color printers. The library also loans out iPads for students to use. The Fisher Fine Arts Library has ARTEC 3D scanners available for use in the Materials Library and collaborates with the BioTech Commons Library to offer 3D and poster printing services to the Penn Community. Common Press is a makerspace for letterpress printing and bookmaking technologies, featuring presses dating from 1850 to 1963 and 400 drawers of metal and wood type. You can create handmade posters, prints, chapbooks, poetry broadsides, art books, and cards. We print from our collection of wood and metal type, plates produced from digital files, laser cut and CNC routed materials, paper collages, or hand carved blocks.

Collections
FFAL collects materials to support research in art and architecture, the decorative arts, photography, historic preservation, city planning, and urban design. The entire history of art is represented, from antiquity to the present, as are many languages. Monographs, exhibition catalogs, journals, facsimiles, reference materials, ephemeral materials, and microforms are all of interest. FFAL acquires electronic resources, including image databases, electronic journals, indexes, and other reference works; videos and other media materials are also purchased. The Perkins Rare Books Library constitutes approximately three thousand rare books as well as drawings, maps, and prints, representing over 400 years of architectural history and theory. The Image Collection covers subjects ranging from prehistoric art and architecture through art and architecture of the present day. The collection houses over 500,000 35mm slides.

The Architectural Archives, administered by the School of Design but located on the lower level of the Fine Arts Library building, collects and preserves the works of over 400 designers from the 18th century to the present. The Architectural Archives gained its international reputation initially through the Louis I. Kahn Collection whose resources include all drawings, models, photographs, correspondence, and project files from Kahn's office. Purchased by the Commonwealth of Pennsylvania from the Kahn estate, the Collection was placed on permanent loan to the University by the Pennsylvania Historical and Museum Commission in 1978. The Kahn Collection attracts a steady stream of international visitors and has served as the basis for innumerable publications and exhibitions. Major collections include the comprehensive archives of a number of the twentieth century's most significant designers, including: Robert Venturi & Denise Scott Brown; Lawrence Halprin; Ian L. McHarg; Edmund N. Bacon; Anne Griswold Tyng; and Louis I. Kahn. The research collections in the Archives are available to faculty, students, and scholars for independent study as well as to support teaching at the University of Pennsylvania. The archives facility in the lower level of the Fisher Fine Arts Building houses the Harvey & Irwin Kroiz Gallery, a specialized library, study room, and seminar room, as well as storage and processing facilities.

Further, the program must demonstrate that all students, faculty, and staff have access to architecture librarians and visual resource professionals who provide discipline-relevant information services that support teaching and research.

Program Response:
FFAL maintains extensive service hours during the academic year, averaging 90 hours per week. Reference and information services in architecture and related fields are provided by professional librarians in person or virtually, synchronously and asynchronously. The librarians are also available for research consultations by request or as assigned by faculty. The Materials Library at FFAL frequently hosts the Weitzman School of Design's professional programs in Architecture, Landscape Architecture, Fine Arts, and Historic Preservation for materials research sessions and workshops in addition to offering 3D scanning services. The Common Press offers workshops to students, faculty, and staff; provides studio access for independent projects; and provides curricular support for creative projects across the university.

Penn Libraries belongs to consortia and inter-lending networks which open hundreds of research collections to the Penn community. For example, Borrow Direct is a rapid delivery inter-lending service comprised of Brown, Chicago, Columbia, Cornell, Dartmouth, Duke, Harvard, Johns Hopkins, MIT, Penn, Princeton, Stanford, Yale, and the Center for Research Libraries. E-Z Borrow, a network of over 60 academic libraries in Pennsylvania and nearby states, is also available and aims to deliver books within four working days of placement of the request by patrons. The SHARES network makes materials available from some of the world's foremost research collections including the Getty, Museum of Modern Art, and the Art Institute of Chicago. Faculty Express delivers to Penn departmental offices requests for books and articles made by standing faculty. Penn Libraries subsidizes the entire cost of acquiring materials through Interlibrary Loan, Borrow Direct, and E-Z Borrow for Penn faculty, graduate and undergraduate students, and staff. All Penn students, faculty and staff are eligible for the Library's rapid article scanning service and digital document delivery.

Guest Lecture Series
Architecture Department Lecture Series:
Fall 2023:

- The KPF Lecture
  - Eric Owen Moss, Principal and Lead Design, Eric Own Moss Architects
- "The Story of Architecture"
  - Witold Rybczynski, the Martin and Margy Meyerson Professor Emeritus of Urbanism
- Marlon Blackwell, Principal, Marlon Blackwell Architects
- "Building Futures: Technology, Ecology, and Architectural Practice"
  - Richard Garber with Robert Stuart-Smith, Winka Dubbeldam, Kerenza Harris, and Shajay Bhooshan
- Daliana Suryawinata & Florian Heinzelmann, Directors, SHAU
- Vanessa Grossman, Assistant Professor of Architecture

Spring 2024:

- "etc."
  - Rossana Hu, Miller Professor and Chair of Architecture; Co-Founder, Neri&Hu Design and Research Office
- "Emotional Heritage"
  - Ricardo Flores and Eva Prats, directors, Flores & Prats Architects
- "The City as a Technical Being: On the Mode of Existence in Architecture"
  - Peter Trummer, Dean of the Faculty of Architecture, University of Innsbruck
- The Cunningham Lecture
  - Lucas ter Hall, Co-Founder, Studio RAP
- "Architectures of the Technopolis: Archigram and the British High Tech"
  - Annette Fierro, Associate Professor of Architecture
- Marcello Galiotto and Alessandra Rampazzo, Co-Founders, AMAA
- The Jeffrey Fine (C'76, MArch'78) and Andrea Katz Lecture

    - Preston Scott Cohen, Founder, Preston Scott Cohen, Inc
- The EwingCole Lecture
    - Mark Lee, Founder, Johnston Marklee

History and Theory Guest Lecturers:
Fall 2023:

- Charles Davis II, University of Texas
- Paulo Tavares, Universidade de Brasilia
- Danika Cooper, University of California Berkeley
- Daniel Talesnik, University of Bath
- Kadambari Baxi, Barnard College

Spring 2024:

- Rachel Lee, TU Delft
- Carlos Eduardo Dias Comas, Universidade Federal do Rio Grande so Sul
- Peter Laurence, Clemson University, plus other contributors to the book *Histories of Architecture Education in the United States*
- Zhongjie Lin, Weitzman School - Planning + Preservation
- Sarah Lopez, Weitzman School - Planning + Preservation

Technology Sequence Guest Lecturers 2023

- "Detailing Mass Timber"
    - Gawon Shin, Senior Associate, SHoP,
- "The management strategy of BIM and AI at the Asia Games Stadium"
    - Bowen Qin, PhD candidate University of Pennsylvania, and Kelvin Wang, BIM general consultant of ZIAD
- "Building with Organic Materials – Thatch Tectonics"
    - Dr. Anne Beim, Professor Royal Danish Academy of Art and Director at CINARK
- "Building the Plane as You Fly It – Computational Design for Extreme Scale, Speed, and Complexity"
    - Keyan Rahimzadeh, Computational Design Manager, Grimshaw NY
- "Adaptive Lightweight Building Technologies and Facades – Experiment and Prototype"
    - Enrica Oliva, Partner & COO, Werner Sobek New York Corp. and Dr. Stefanie Weidner, Director of Sustainability, Copenhagen, Werner Sobek

Visual Studies Panel 2023

- Yaohua Wang, Ashley Bigham, Matthew Au, Nima Javidi, Antonio Torres

<u>Selected Exhibitions, Conferences, and Symposia</u>
Hybrids and Haecceities
ACADIA Conference 2022
October 27-29, 2022, University of Pennsylvania Weitzman School of Design

"Hybrids & Haecceities seeks novel approaches to design and research that dissolve binary conditions and inherent hierarchies in order to embrace new modes of practice. Haecceities describe the qualities or properties of objects that define them as unique. Concurrently, Hybrids are entities with characteristics enhanced by the process of combining two or more elements with different properties. In concert, these terms offer a provocation toward more inclusive and specific forms of computational design.

Hybrids & Haecceities aligns with a fundamental shift away from abstract generalized models of production toward greater degrees of customization at unprecedented scales, made possible by the Fourth Industrial Revolution. With greater reliance on cyber-physical systems, this shift supports more diverse and considered forms of embodiment and participation in the built

environment. Conversely, the design and construction industries have profound global effects with significant political, economic, and environmental impacts. The urgent need to decarbonize buildings, and at the same time, provide equitable infrastructure to communities at risk, places responsibility on the design disciplines to form new collaborations in the effort to address today's social and ecological crises.

ACADIA 2022 invited contributions on how Hybrids & Haecceities poses new theory and practice approaches to design and construction that transgress disciplinary boundaries, be these computational, material, robotic, cultural, infrastructural, or ecological."

Minerva Parker Nichols: The Search for a Forgotten Architect
Exhibition
March 21-July 22, 2023, Harvey & Irwin Kroiz Gallery, Architectural Archives, University of Pennsylvania Weitzman School of Design

"The exhibition tells the story of Minerva Parker Nichols (1862-1949), the first woman in the country to practice architecture independently, with an office in Philadelphia and commissions nationwide. The exhibition reflects more than a decade of research by Penn graduate Molly Lester and recent work by Elizabeth Felicella, who is photographing surviving buildings by Minerva, thus creating an archive in the absence of one.

Working during the suffrage movement, Minerva had many clients who were women. Her commissions included dozens of private residences, large and small, the New Century Clubs of Philadelphia and Wilmington, as well as the unbuilt Queen Isabella Association Pavilion at the 1893 Chicago World's Fair. The opening of her Philadelphia office in 1888 drew the attention of the Philadelphia press, and her death in 1949 warranted a headlined obituary in The New York Times. She supervised all her own construction, declaring "I don't mind walking over scaffolding, but I draw the line on ladders."

And yet, despite this legacy, Minerva is rarely included in the story of Philadelphia's built environment or broader historical assessments. Her archival record is even more elusive, as only a handful of her drawings survive, and a large body of her work remains unknown. Of her surviving commissions, most are private residences; one of her residential designs has been converted to a non-profit retreat center, and her only surviving women's club is now a children's theater in Wilmington, Delaware."

Housing Justice Futures: Philadelphia Forum on Design, Race, and Climate Change
Symposium
March 16-17, 2023, University of Pennsylvania Weitzman School of Design
"As we contend with our moral and ethical responsibility for the wellbeing of people and the planet, this forum will consider housing design and policy at the intersection of race and climate change.

The "poorest" large city in the United States and one of the most segregated(1), Philadelphia has nearly one in four residents living in poverty and residents of color are far more likely than whites to be impoverished.(2) More than a third of Philadelphia renters are paying over half their income on housing and another 4,400 households are without a place to live.(3) At the same time, Philadelphia remains at risk to climate change, most notably extreme heat and inland and coastal flooding. As in other US cities, low-income, non-white Philadelphians are disproportionately vulnerable to these effects. Furthermore, the COVID-19 pandemic has compounded decades of policies that continue to perpetuate racial inequities and health disparities in black and brown communities.

Engaging researchers, and practitioners, and community stakeholders, we will examine the historical inequities that precipitated the housing crisis in Philadelphia and other US cities while considering actionable strategies for housing justice in the future.”

6—Public Information

The NAAB expects accredited degree programs to provide information to the public about accreditation activities and the relationship between the program and the NAAB, admissions and advising, and career information, as well as accurate public information about accredited and non-accredited architecture programs. The NAAB expects programs to be transparent and accountable in the information provided to students, faculty, and the public. As a result, all NAAB-accredited programs are required to ensure that the following information is posted online and is easily available to the public.

6.1 Statement on NAAB-Accredited Degrees

All institutions offering a NAAB-accredited degree program or any candidacy program must include the exact language found in the NAAB Conditions for Accreditation, 2020 Edition, Appendix 2, in catalogs and promotional media, including the program's website.

Program Response:
The University of Pennsylvania's Master of Architecture (3-year program) is accredited by the NAAB. The following statement is included in the catalog, pursuant to the requirement of the NAAB:

In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year term, an eight-year term with conditions, or a two-year term of continuing accreditation, or a three-year term of initial accreditation, depending on the extent of its conformance with established education standards.

Doctor of Architecture and Master of Architecture degree programs may require a non-accredited undergraduate degree in architecture for admission. However, the non-accredited degree is not, by itself, recognized as an accredited degree.

The University of Pennsylvania Stuart Weitzman School of Design Department of Architecture offers the following NAAB accredited degree programs:
[Master of Architecture any discipline; and typically 124 undergraduate credit hours + plus 84 graduate semester credit hours]

Next accreditation visit: 2024
https://www.design.upenn.edu/architecture/graduate/accreditation-information

6.2 Access to NAAB Conditions and Procedures

The program must make the following documents available to all students, faculty, and the public, via the program's website:

a) Conditions for Accreditation, 2020 Edition
b) Conditions for Accreditation in effect at the time of the last visit (2009 or 2014, depending on the date of the last visit)
c) Procedures for Accreditation, 2020 Edition
d) Procedures for Accreditation in effect at the time of the last visit (2012 or 2015, depending on the date of the last visit)

Program Response:
a) Conditions for Accreditation, 2020 Edition:

https://www.naab.org/wp-content/uploads/2020-NAAB-Conditions-for-Accreditation.pdf

b) Conditions for Accreditation in effect at the time of the last visit:
https://www.naab.org/wp-content/uploads/01_Final-Approved-2014-NAAB-Conditions-for-Accreditation-2.pdf

c) Procedures for Accreditation, 2020 Edition:
https://www.naab.org/wp-content/uploads/2020-NAAB-Procedures-for-Accreditation.pdf

d) Procedures for Accreditation in effect at the time of the last visit:
https://www.naab.org/wp-content/uploads/2016/03/Full-Document.pdf

6.3 Access to Career Development Information

The program must demonstrate that students and graduates have access to career development and placement services that help them develop, evaluate, and implement career, education, and employment plans.

Program Response:
Weitzman students can access career development information and resources from the School's Office of Professional Development and Leadership or the University's Office of Career Services. Together, these offices help students explore a variety of career and internship options, clarify professional development goals, connect with career mentors, prepare for the world of work, visit with employers, and conduct comprehensive job searches. Through Career Services, students can access extensive job listings, participate in online or in-person career coaching sessions, resume reviews, mock interviews, or a diverse range of skills building workshops. Weitzman's Director of Professional Development and Leadership also facilitates students' connections with alumni within firms and organizations across the US and internationally and organizes regular site visits to firms and organizations in all of the School's disciplines (https://www.design.upenn.edu/career-resources). The career services program organizes a series of workshops, panels, lectures, recruiting events and online resources to help prepare students for career opportunities after Weitzman. (Career Services | University of Pennsylvania (upenn.edu))

6.4 Public Access to Accreditation Reports and Related Documents

To promote transparency in the process of accreditation in architecture education, the program must make the following documents available to all students, faculty, and the public, via the program's website:

a) All Interim Progress Reports and narratives of Program Annual Reports submitted since the last team visit
b) All NAAB responses to any Plan to Correct and any NAAB responses to the Program Annual Reports since the last team visit
c) The most recent decision letter from the NAAB
d) The Architecture Program Report submitted for the last visit
e) The final edition of the most recent Visiting Team Report, including attachments and addenda
f) The program's optional response to the Visiting Team Report
g) Plan to Correct (if applicable)
h) NCARB ARE pass rates
i) Statements and/or policies on learning and teaching culture
j) Statements and/or policies on diversity, equity, and inclusion

Program Response:
a) All Interim Progress Reports and narratives of Program Annual Reports submitted since the last team visit:

https://www.design.upenn.edu/sites/default/files/uploads/GR-ARCH/Penn%202-Yr%20IPR%202018.pdf

https://www.design.upenn.edu/sites/default/files/uploads/GR-ARCH/Penn%205-Yr%20IPR%202021.pdf

b) All NAAB responses to any Plan to Correct and any NAAB responses to the Program Annual Reports since the last team visit
https://www.design.upenn.edu/sites/default/files/uploads/GR-ARCH/Penn%202-Yr%20IPR%20Letter%202019.pdf

https://www.design.upenn.edu/sites/default/files/uploads/GR-ARCH/Penn%205-Yr%20IPR%20Response%202021.pdf

c) The most recent decision letter from the NAAB
https://www.design.upenn.edu/sites/default/files/uploads/GR-ARCH/Penn%20Decision%20Letter%202016.pdf

d) The Architecture Program Report submitted for the last visit
https://www.design.upenn.edu/sites/default/files/uploads/University%20of%20Pennsylvania%20APR%202015%20FINAL.pdf

e) The final edition of the most recent Visiting Team Report, including attachments and addenda
https://www.design.upenn.edu/sites/default/files/University%20of%20Pennsylvania%20VTR%20%5BFINAL%20EDIT%5D.pdf

f) The program's optional response to the Visiting Team Report
N/A

g) Plan to Correct (if applicable)
N/A

h) NCARB ARE pass rates
https://www.ncarb.org/pass-the-are/pass-rates/are5-pass-rates-school

i) Statements and/or policies on learning and teaching culture
https://www.design.upenn.edu/about-weitzman-school

j) Statements and/or policies on diversity, equity, and inclusion
https://www.design.upenn.edu/jxb/about

6.5 Admissions and Advising

The program must publicly document all policies and procedures that govern the evaluation of applicants for admission to the accredited program. These procedures must include first-time, first-year students as well as transfers from within and outside the institution. This documentation must include the following:

a) Application forms and instructions
b) Admissions requirements; admissions-decisions procedures, including policies and processes for evaluation of transcripts and portfolios (when required); and decisions regarding remediation and advanced standing
c) Forms and a description of the process for evaluating the content of a non-accredited degrees
d) Requirements and forms for applying for financial aid and scholarships
e) Explanation of how student diversity goals affect admission procedures

Program Response:
a. Application Forms and Instructions:
https://www.design.upenn.edu/graduate-admissions/how-apply

b. Admissions Requirements and Procedures:
https://www.design.upenn.edu/graduate-admissions/how-apply

c. Forms and a description of the process for evaluating the content of a non-accredited degree:
https://www.design.upenn.edu/admissions-faqs

d. Requirements and forms for applying for financial aid and scholarships:
https://www.design.upenn.edu/graduate-admissions/tuition-and-financial-aid

e. Explanation of how student diversity goals affect admission procedures:
https://www.design.upenn.edu/graduate-admissions/admissions-policies

6.6 Student Financial Information

6.6.1 The program must demonstrate that students have access to current resources and advice for making decisions about financial aid.

Program Response:
https://www.design.upenn.edu/graduate-admissions/tuition-and-financial-aid

6.6.2 The program must demonstrate that students have access to an initial estimate for all tuition, fees, books, general supplies, and specialized materials that may be required during the full course of study for completing the NAAB-accredited degree program.

Program Response:
https://www.design.upenn.edu/graduate-admissions/tuition-and-financial-aid

Masoud Akbarzadeh

Courses Taught

University of Pennsylvania
Assistant Professor of Architecture
Founding Director of Polyhedral Structures Laboratory

2017- Geometry-Based Structural Design and Fabrication, Technology Elective, 1 CU
2017- Architectural Structure and Prefabricated Systems, Design Research Studios, 2 CU
2017- Structures I & II, Required Technology Courses, Co-taught with Prof. Richard Farley, 0.5 CU

Educational Credentials

ETH Zurich
2016 Doctor of Science
MIT
2012 Master of Science in Design Computation
2011 Master of Architecture
Iran University of Science and Technology
2007 Master of Science in Earthquake Engineering and Dynamics of Structures
Zanjan University
2004 Bachelor of Science in Civil and Environmental Engineering

Teaching Experience

University of Pennsylvania
2017- Assistant Professor
GRASP Lab, School of Engineering and Applied Science, University of Pennsylvania
2021- Affiliated Faculty
Institute of Technology in Architecture, ETH Zurich
2012-16 Research & Teaching Assistant
Department of Architecture, Massachusetts Institute of Technology
2008-12 Research & Teaching Assistant

Selected Publications and Recent Research

2023 M. Akbarzadeh. Introduction to Polyhedral Graphic Statics and Design of Funicular Structures. Cambridge
University Press, Cambridge, 2024. in preparation

2022 M. Akbarzadeh, D. Aviv, H. Jamelle, and R. Stuart-Smith. Hybrids & Haecceities: Paper Proceedings of the 42nd Annual Conference for the Association for Computer Aided Design in Architecture. ACADIA, Weitzman
School of Design, University of Pennsylvania, Philadelphia, PA, US, 2023.

2022 Hao Zheng, Hossein Mofatteh, Marton Hablicsek, Abdolhamid Akbarzadeh, and Masoud Akbarzadeh.
Dragonfly-Inspired Wing Design Enabled by Machine Learning and Maxwell's Reciprocal Diagrams.
Advanced Science, page 2207635, 2023

2022 Mostafa Akbari, Armin Mirabolghasemi, Mohammad Bolhassani, Abdolhamid Akbarzadeh, and Masoud
Akbarzadeh. Strut-based Cellular to Shellular Funicular Polyhedral Materials. Advanced Functional
Materials, page 2109725, 2022

2022 (PI) Advanced Research Projects Agency-Energy, U.S. Department of Energy. $2,450,000.
2021 (Co-PI) The United States Department of the Interior National Park Service, $26,956.
2020 (Co-PI) National Science Foundation Future of Manufacturing Grant (NSF-FM), $4,600,000
2020 (PI) National Science Foundation CAREER Award, $599,722

Mohamad Alkhayer

Courses Taught

	University of Pennsylvania
	Adjunct Associate Professor
2000-2023	Deployable Structures
2004-2023	Experiments in Structures
2001-2023	Structural Simulation Lab

Educational Credentials

	University of Pennsylvania
2007	PhD in Architecture.
	Pratt Institute
1998	Master of Architecture (With Distinction)
	University of Tishreen
1994	Bachelor of Architecture (With Honor)

Teaching Experience

	University of Pennsylvania
2021-Present	Adjunct Associate Professor
2001-2021	Lecturer

Professional Experience

	RBSD Architects PC.
2021-present	Principal
2009-2021	Senior Associate
	Roger, Burgan, Sheheen, and Deshler Architects INC.
2003-2009	Senior Designer
	MES, INC
1998-2003	Designer / Project Manager

Licenses/Registration

2021 -present	Registered Architect, New York State

Selected Publications and Recent Research

2018	57 Pavilions – Techniques, Morphology, and Detailing of a Pavilion.
1999-present	Deployable and Kinetic Structures research, University of Pennsylvania
1999-present	Tensile and Light Weight Structures research, University of Pennsylvania

Professional Memberships

2021-Present	AIA, American Institute of Architects

Dorit Aviv

Courses Taught

University of Pennsylvania

ARCH6330 Environmental Systems I
ARCH7080 Bioclimatic Studio
ARCH7550 Innovation and Prototyping in Environmental Building Design

Educational Credentials

Princeton University, Princeton, NJ

2020 Ph.D in Architectural Technology
2014 Post-professional M.Arch

The Cooper Union, New York, NY

2009 B.Arch

Teaching Experience

2018-Present **University of Pennsylvania Weitzman School of Design**, Philadelphia, PA
2014-2016 **The Cooper Union Irwin S. Chanin School of Architecture**, New York, NY
2015 **Pratt Institute School of Architecture**, Brooklyn, NY

Professional Experience

2014-2016 **Tod Williams Billie Tsien Architects**, New York, NY
2009-2012 **Kohn Pedersen Fox Associates University**, New York, NY
2009 **Atelier Raimund Abraham**, New York, NY

Licenses/Registration

Licensed in New York State

Recent Publications and Recent Research

2023 Ma N, Waegel A, Hakkarainen M, Braham WW, Glass L, Aviv D. Blockchain+ IoT sensor network to measure, evaluate and incentivize personal environmental accounting and efficient energy use in indoor spaces. Applied Energy. 2023 Feb 15;332:120443.

2022 Aviv D, Hou M, Teitelbaum E, Meggers F. Simulating invisible light: a model for exploring radiant cooling's impact on the human body using ray tracing. Simulation. 2022:00375497221115735.

2022 Aviv D, Gros J, Alsaad H, Teitelbaum E, Voelker C, Pantelic J, Meggers F. A data-driven ray tracing simulation for mean radiant temperature and spatial variations in the indoor radiant field with experimental validation. Energy and Buildings. 2022 Jan 1;254:111585.

2021 Aviv D, Chen KW, Teitelbaum E, Sheppard D, Pantelic J, Rysanek A, Meggers F. A fresh (air) look at ventilation for COVID-19: Estimating the global energy savings potential of coupling natural ventilation with novel radiant cooling strategies. Applied Energy. 2021 Jun 15;292:116848.

2020 Aviv D, Moradnejad M, Ida A, Wang Z, Teitelbaum E, Meggers F. Hydrogel-based evaporative and radiative cooling prototype for hot-arid climates. In Proceedings of the 11th Annual Symposium on Simulation for Architecture and Urban Design 2020 May 25 (pp. 1-8).

Professional Memberships

NCARB
AIA

NAAB

Ezio Blasetti

Courses Taught

	University of Pennsylvania
	Senior Lecturer
2022-2023	Design Studio II
2020-2023	Material Formations
2020-2022	Material Agencies
2020-2022	Intro to 3D Programming, Intro: Micro-Controllers, Algorithmic Design
2020-2021	Tech Designated Elective: Computational Composite Form
2016-2018	Advanced Architectural Design Studio
2014-2023	Arch Study Abroad Program: Greece
2013-2021	Arch Summer Institute: Digiblast I&II Fundamentals of 3D Modeling and Fabrication
2013-2018	Arch Summer Institute: Advanced Architectural Design
2013-2015	Design Studio I
2012-2024	Form and Algorithm
2012-2019	Advanced Design: Research Studio

Educational Credentials

	Columbia University, New York
2006	Master of Science in Advanced Architectural Design
	National Technical University of Athens
2005	Master of Architecture - Diploma
	Ecole Nationale Supérieure d'Architecture de Paris la Villette
2002	Erasmus Exchange Program

Teaching Experience

	University of Pennsylvania
2023-present	Lecturer
2019-2023	Senior Lecturer
2012-2019	Lecturer

Professional Experience

	Maeta Design
2011-present	Principal
	Ahylo Studio, Athens/New York
2005-2012	Principal
	Acconci Studio
2006-2008	Designer/Architect

Licenses/Registration

2005 -present **Registered Architect, Technical Chamber of Greece (TEE – TCG)**

Selected Publications and Recent Research

2022	Acadia 2022 - "Nanotectonica SEM-GAN" - Paper & Advanced Materials Session Chair
2021	Future Airports | ORO Editions; edited by Ali Rahim
2020	CAADRIA 2020 | "3D Architectural Form Style Transfer through Machine Learning"
2018	57 Pavilions | Applied Research and Design Publishing, ORO Editions; edited by Andrew Saunders
2015	Mythomanias | publisher: Puctum Books
2014	What's the Matter Conference - Barcelona, Spain
2011	Apomechanes, Nonlinear Computational Design Strategies | Aspri Mera Editions, Athens Greece

Professional Memberships

2005-Present **Technical Chamber of Greece**

Mattheues (Matthijs) Bouw

Courses Taught

University of Pennsylvania
Professor of Practice
Director of the Urban Resilience Certificate Program

2015 - 2023	Seminar 'Design with Risk'
2021 – 2023	Seminar 'Public Health, Cities and the Climate Crisis'
2014 – 2023	Interdisciplinary 700 Studio (co-listed with Landscape Architecture)

Educational Credentials

Technical University, Delft

1995	Master of Science in Architecture, specialization Architectural Design

Teaching Experience

	University of Pennsylvania
2014 - 2017	Rockefeller Urban Resilience Fellow
2017 - 2020	Associate Professor of Practice
2020 - present	Professor of Practice
	Pratt GAUD
2022 – 2023	Critic-at-Large
	Harvard GSD
2021 – 2022	Instructor
	The Berlage Institute
2009 – 2011	Thesis Advisor
	RWTH Aachen
2006 – 2008	Chair and Professor (i.V) Building Theory and Principles of Design

Professional Experience

	One Architecture BV, Amsterdam
2000 – present	Founder and Principal
	One Architecture & Urbanism, Inc, New York
2014 – present	Founder and President

Licenses/Registration

2005 -present	Licensed Architect, Stichting Bureau Architectenregister, Netherlands

Recent Publications and Recent Research

2020	Matthijs Bouw and Erik van Eekelen, 'Building with Nature: Creating, implementing and upscaling Nature-based Solutions,' NAi010 publishers
2020	Matthijs Bouw and Jonathan Barnett, 'Managing the Climate Crisis,' Island Press
2018 - present	P.I. on multiple funded research projects on climate adaptation

William W. Braham

Courses Taught

University of Pennsylvania
Andrew Gordon Professor of Architecture

2022-2023 Arch 7510: Ecology, Technology, Design (1CU)
2022-2023 Arch 7520: EBD Research Seminar: Fundamentals of Bioclimatic Design (1 CU)
2022-2023 Arch 7080: EBD Research Studio (2 CU)

Educational Credentials

University of Pennsylvania
1995 Ph.D Architecture
1983 Master of Architecture
Princeton University
1979 B.S.E. Civil & Environmental Engineering. Magna Cum Laude

Teaching Experience

University of Pennsylvania
2023 Andrew Gordon Professor of Architecture
2015 Professor. Architecture
2010 Director. Master of Environmental Building Design
2008-11 Interim Chair. Architecture
2001 Associate Professor. Architecture
1995 Assistant Professor. Architecture
Princeton University
2019 Visiting Scholar. Andlinger Center for Energy and Environment.

Professional Experience

Center for Environmental Building + Design
2010 Director
Ivalo Lighting & Lutron Electronics
2001-10 Design Consultant
Studio Luxe: Architecture and Illumination
1995-10 Principal
Buttrick White & Burtis Architects, NY
1983-89 Associate
1978-80 **Princeton Energy Group/Harrison Fraker Architects**

Licenses/Registration

1985 Registered Architect, PA, NY, NCARB

Recent Publications and Recent Research

2023 Braham, William W., M. Hou, S. Prabhakaran, & D. Tilley. 'Embodied carbon in biogenic and earth materials: Accounting for the work of the biogeosphere in construction materials.' *The Routledge Handbook on Embodied Carbon in the Built Environment*

2023 “Searching for a “Bioclimatic Law” in Architecture: Comfort and the Ethics of (Human) Performance.” In *Paradigms of Performativity in Design and Architecture*. Routledge.

2023 Basunbul, Anwar Islem, & William W. Braham. "Climate responsive lessons from an architectural and ethnographic study of Hijazi traditional dwellings in Jeddah, Saudi Arabia." *Frontiers in Built Environment 9*.

2022 Braham, William W., et al. 'Cooking, Heating, Insulating Products and Services (CHIPS) for Mongolian ger: Reducing energy, cost, and indoor air pollution', *Energy for Sustainable Development*, 71.

2019 Braham, William W., J. M. Lee, E. Oskierko-Jeznacki, B. Silverman, & N. Khansari. "Spatial concentration of urban assets in the Philadelphia region: An energy synthesis." *Ecological Modelling* 401.

Professional Memberships

1985 American Institute of Architects, Fellow: 2006
2003 American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE)

Winka Dubbeldam

Courses Taught

University of Pennsylvania
Professor and former Chair [2013-23] and Director Advanced Research & Innovation Lab [ARI]

2020-2023 Advanced Graduate Research - Design Studio, Coordinator

Educational Credentials

Colombia University

1991-1992 Master of Architecture II

Academy of Architecture, Rotterdam

1983-1990 Professional Master's in Architecture

Teaching Experience

University of Pennsylvania

2018-2023 The Ella Warren Shafer Miller Professor and Chair of the Department of Architecture. Director of ARI

2013-2018 Professor & Chair of the Department of Architecture, Director of ARI

2003-2014 Founder & Director of M.Arch II

2009-2013 Professor of Practice, 3rd Year Masters Design Studios

1995-2002 Lecturer

Cornell University

2010 Spring Masters Studio and summer workshop

Harvard University

2002, '08, '09 Visiting Practice Professor of Architecture, 3rd year Adv. Masters Studio

Columbia University

1997-2002 Adjunct Assistant Professor - 3rd year Masters Design Studio

Professional Experience

Archi-Tectonics NYC, LLC [New York, China, Netherlands]

1994-Current Founder and Partner [WBE certified]

UPenn Provost

2015- 2023 Exhibition Committee and Search Committee

PLAN Magazine, Italy

2022 Guest Editor on the Editorial Board

Bartlett School of Architecture, UCL London, UK - for the RIBA

2017-2022 External Examiner

AA School of Architecture, London, UK - for the RIBA

2017-2022 External Examiner

Azrieli School of Architecture Tel Aviv

2021 Chair of the jury for the MiG Prize

Licenses/Registration

1994 Registered Dutch Architect

Selected Publications and Recent Research

2023 Springer publication *NATURES* for UIA World Congress Of Architects Copenhagen/paper: "Synthetic natures"

2023 WILEY London: "Building Futures"

2022 Acadia Publication of conference *Hybrids & Haecceities* at UPenn [organizer]

2022 THE PLAN magazine, Guest editor: Introduction article *"Synthetic Natures."*

2021 Strange Objects, New Solids Massive Things, publication by Actar Spain

Professional Memberships

Assoc. AIA
WBE certified
SARA member
ULI member
CTBUH member

NAAB

Daniela Fabricius

Courses Taught

University of Pennsylvania
Assistant Professor

2022-2023	ARCH 611 History and Theory III - Contemporary Architectural Theories
2023	ARCH 511 History and Theory I 2022-2023 ARCH7060005 Independent Thesis
2022	ARCH3101 Spatial Reparations: Material and Territorial Practices of Justice
2020-2023	ARCH 715 Contemporary Aesthetics Theory

Educational Credentials

	Princeton University
2016	Ph.D., Architectural History and Theory
	Columbia University, GSAPP
2003	M.Arch.
	Brown University
1998	B.A., Comparative Literature and Visual Art

Teaching Experience

	University of Pennsylvania
2022 – present	Assistant Professor
2006 – 2022	Lecturer
	Pratt Institute, Undergraduate Architecture
2015 – 2022	Adjunct Assistant Professor

Fellowships

2013 – 2014	Mrs. Giles Whiting Doctoral Fellowship in the Humanities
2012 – 2013	German Academic Exchange Service (DAAD) Research Fellowship
2005 – 2006	Whitney Museum of American Art Independent Study Program

Selected Publications and Recent Research

	Awards and Grants
2014	Emerging Scholars Prize, Historians of German and Central European Art
2007	New York State Council on the Arts Grant
2006	Graham Foundation for Advanced Studies in the Arts, Individual Grant
	Books
In progress	*The Ethics of Calculation: Architecture and Rationalism in Postwar Germany* (In contract with University of Minnesota Press)
In progress	*A Minor Architecture: The Writings of Jennifer Bloomer* (In preparation)
	Articles
2023	“Calculating Growth: Prediction and Simulation in Berlin, 1968,” *Perspecta: The Yale Architectural Journal* Volume 55 (New Haven: MIT Press), February 2023.
2018	“Image, Medium, Artifact: Heinrich Klotz and the Postmodern Architecture Museum,” in *Mediated Messages: Periodicals, Exhibitions and the Shaping of Postmodern Architecture*, ed. Léa-Catherine Szacka and Véronique Patteeuw (London: Bloomsbury, 2018) (Peer Reviewed).
2016	"Architecture before architecture: Frei Otto’s ‘Deep History,’" *Journal of Architecture* Volume 21, Issue 8, 2016. (Peer Reviewed)

Richard John Farley

Courses Taught

	University of Pennsylvania
	Adjunct Professor
2021-2023	Structures I
2021-2023	Structures II
2021-2023	Physics for Architects

Educational Credentials

	University of Pennsylvania
1974	Master of Architecture in Studio of Louis I. Kahn
1973	Master of Science in Urban and Civil Engineering
1973	Master of Architecture
	Manhattan College
1970	Bachelor of Engineering in Civil Engineering

Teaching Experience

	University of Pennsylvania
2008-present	Adjunct Professor
1982-2008	Adjunct Associate Professor

Professional Experience

	Richard J. Farley, Architect
2018-present	Principal
	KlingStubbins (now Jacobs)
1977-2018	Senior Principal/VP Corporate Commercial Global Building Projects
	Environmental Design Collaborative
1974-1977	Designer/Architect

Licenses/Registration

1977-present	**Registered Architect**, Pennsylvania
1979-present	**Professional Engineer**, New Jersey
2006-present	**LEED Accredited Professional**, US Green Building Council

Selected Publications and Recent Research

2008	KlingStubbins:Palimpest - Monogram
2000	KlingLindquist:Realm of Shadows -Monogram
2018-present	Advisor, Polyhedral Structures Lab, University of Pennsylvania

Professional Memberships

2007-present	**FAIA, College of Fellows, American Institute of Architects**

Annette Fierro

Courses Taught

University of Pennsylvania
Associate Professor

2024	ARCH 502
2023-2024	ARCH 991/998 Thesis Workshop
2023	ARCH 7190

Educational Credentials

Rice University

1984	M.Arch
1980	B.S. in Civil Engineering, Minor History of Art

Teaching Experience

University of Pennsylvania

2002 - present	Associate Professor
2017- present	Director of Advising and Admissions
2007 - present	Master of Architecture+ Thesis Program Director and Critic
2017 - 2021	Associate Chair, Department of Architecture
2007 - 2021	Director, Study Abroad Programs/PennParis Program
2002 - present	Design Studio Critic and At-Large Coordinator: 2nd & 3rd Semester Graduate Program
1993 - 2002	Assistant Professor

College of Architecture, Georgia Institute of Technology, Atlanta, GA

1989 - 1993	Assistant Professor Graduate/PhD Seminars: "Archigram & Its Legacies," "Glass, Technology, and the Contemporary Spectacle in Paris," "Construction in the Modern World: The Villa," "Japan: Architecture and Technology"

Professional Experience

Current **Annette Fierro Architect**

Licenses/Registration

1996 - present **Registered Architect**, New York

Selected Publications and Recent Research

Books

Forthcoming	*Approaching Nature: Recalibrating Zero* (Routledge Press)
2023	*Architectures of the Technopolis: Archigram and the British High Tech* (Lund Humphries Press, London)
2003	*The Glass State: The Technology of the Spectacle, Paris 1981-1998* (MIT Press)

Articles, Chapters and Presentations

Forthcoming	"Conceits and Constructs: Vegetal Architecture," *LA+ Interdisciplinary Journal of Landscape Architecture*, University of Pennsylvania
2022	"The Glass Buildings of François Mitterrand," in *Reflections on Reflections: Cultural History of Glass in Architecture*. Edtd. Sol Camacho. RADDAR series, Brazil. Commissioned essay in concert with the UN International Year of Glass.
2020	"Housing Subjectivities, from the LCC to Uncle Wilf," Invited Keynote Session, M+ Matters: Archigram Cities, M+ Matters with the faculty of the University of Hong Kong
2017	"Effective Depths: Transparent Domains," in Rethinking Pei, A Centenary Symposium, Harvard Graduate School of Design, Invited Symposium Lecture
2016	"Counterfeits, Technologies, and Nature," University of Minnesota, Invited Public Lecture, in concert with exhibition of the same.
2016	"Recalibrating Zero: Approaching Nature," Paula G. Manship Endowed Lecture, Louisiana State University, Invited Public Lecture

Richard Garber

Courses Taught

University of Pennsylvania
Lecturer

Fall 2022-23
ARCH601 Design Studio III (Urban Housing Studio)
ARCH732 Matter, Making, and Testing: Designing with Next-Generation Precast Concrete (funded by the PCI Foundation)
ARCH761 Introduction to Real Estate Development for Architects

Spring 2022-23
ARCH704 Advanced Research Studio: Synthetic Natures Mexico City/Denmark's Strange Natures
ARCH736 Seeing Architecture

Educational Credentials

Columbia University, New York, NY
1998 Master of Science Advanced Architectural Design
Rensselaer Polytechnic Institute, Troy, NY
1995 Bachelor of Architecture

Teaching Experience

University of Pennsylvania
2017-present Architecture Department
New Jersey Institute of Technology
2002-2016 College of Architecture and Design
Columbia University
2000-2003 Graduate School of Architecture, Planning, and Preservation
University of California, Los Angeles
1999 Department of Architecture

Professional Experience

GRO Architects, PLLC, New York, NY
2006-present Principal
SHoP Architects, PC, New York, NY
2000-2003 Project manager
Greg Lynn FORM, Venice, CA
1998-2000 Project designer

Licenses/Registration

2023 State of Colorado, ARC.00407983
2022 State of Florida, AR102201
2019 State of Connecticut, 0014441
2006 State of New Jersey, 21AI01735200 & State of New York, 031094

Selected Publications and Recent Research

2023 Building Futures: Technology, Ecology, and Architectural Practice, Wiley, 272 pages, 978-1-119-82921-8

2018 "Präzision, Objektorientierung, Simulation – Neue Standards durch Informationsmodellierung", ARCH+ 233 Norm-Architektur – Von Durand zu BIM, pages 106–109 (German)

2017 Workflows: Expanding Architecture's Territory in the Design and Delivery of Buildings (Architectural Design), Wiley, 144 pages, 978-1-119-31783-8 (Editor)

2014 BIM Design: Realizing the Creative Potential of Building Information Modeling, Wiley, 248 pages, 978-1-118-71979-4

2009 Closing the Gap: Information Models in Contemporary Design Practice (Architectural Design), Wiley, 144 pages, 978-0-470-99820-5 (Editor)

Professional Memberships

American Institute of Architects

NAAB

Vanessa Grossman

Courses Taught

University of Pennsylvania
Assistant Professor
2023 ARCH 611

Educational Credentials

Princeton University School of Architecture
2018 Ph.D. Architecture History & Theory of Architecture
2012 M.A. Degree in Architecture
Paris 1 Panthéon-Sorbonne University, Department of Art History & Archaeology, France
2006 - 2008 Research Master 1 & 2 in History of Architecture
University of São Paulo, School of Architecture & Urban Planning, Brazil
2006 B.Arch. Architecture & Urban Planning

Teaching Experience

University of Pennsylvania
2023 - present Assistant Professor of History & Theory of Architecture
Delft University of Technology, Netherlands
2020 - 2023 Assistant Professor of Architecture, Chair of Architecture & Dwelling
University of Miami School of Architecture
2017 Lecturer
National School of Architecture of Versailles, France
2013 Lecturer

Professional Experience

Journal of the Society of Architectural Historians (JSAH)
2023 - 2026 Exhibitions Review Editor
***Constructed Geographies: Paulo Mendes da Rocha*, Casa da Arquitectura, Matosinhos**
2023 - 2024 Exhibition Co-Curator
Center for Advanced Studies in Architecture, Swiss Federal Institute of Technology, Zürich
2019 - 2020 Postdoctoral Research Fellow
***Todo Dia/Everyday,* 12th International Architecture Biennale of São Paulo**
2019 Exhibition Co-Curator
***Une architecture de l'engagement: l'AUA (1960-1985),* Cité de l'architecture, Paris**
2015 - 2016 Exhibition Co-Curator

Licenses/Registration

Registered Architect, São Paulo, Brazil: Conselho de Arquitetura e Urbanismo

Selected Publications and Recent Research

2025, expected *Une alliance de béton: communisme et architecture moderne dans la France d'après-guerre*, pub. Éditions de La Villette
2024, expected *A Concrete Alliance: Communism and Modern Architecture in Postwar France*, contract Yale University Press
2024, expected *Constructed Geographies: Paulo Mendes da Rocha*, contract Casa da Arquitectura(distrib. Yale University)
2021 *Oscar Niemeyer en France. Un exil créatif*(Paris: Éditions du patrimoine, Collection Carnets d'architectes, w/Benoît Pouvreau).
2013 *Le PCF a changé! Niemeyer et le siège du Parti communiste(1966–1981)*(Paris: Éditions B2)
2021 *Everyday Matters: Contemporary Approaches to Architecture*(Berlin: Ruby Press w/Ciro Miguel), Editor
2015 *AUA, une architecture de l'engagement, 1960–1985*(Paris: Éditions Dominique Carré/Cité de l'architecture et du patrimoine, w/Jean-Louis Cohen), Editor

Rossana Hu

Education

	Princeton University
1995	Master of Architecture and Urban Planning
	University of California at Berkeley
1990	Bachelor of Arts in Architecture, Minor in Music

Professional Experience

	Neri&Hu Design and Research Office, Shanghai, China
2006 –	Founding Partner
	Design Republic, Shanghai, China
2004 –	Founding Partner
1996 – 1999	**Michael Graves & Associates**, Princeton, US
1995 – 1996	**Ralph Lerner Architect**, Princeton, US
1993	**Skidmore, Owings and Merrill**, New York, US
1990 – 1992	**The Architects Collaborative (TAC)**, San Francisco, US

Teaching

	University of Pennsylvania Stuart Weitzman School of Design
2024	Chair of the Department of Architecture
	University of California, Berkeley
2023	Howard Friedman Visiting Professor of Practice
	Harvard Graduate School of Design
2023	Design Critic in Architecture
	Yale School of Architecture
2022	Eero Saarinen Visiting Professor of Architectural Design
	CAUP, Tongji University
2021	Chair and Professor of the Department of Architecture
	Harvard Graduate School of Design
2021	Design Critic in Architecture
	Harvard Graduate School of Design
2019	John C. Portman Design Critic in Architecture
	Yale School of Architecture
2018	Norman R. Foster Visiting Professor

Publications

2023	*Thresholds: Space, Time and Practice*. Guangxi Normal University Press
2021	*Thresholds: Space, Time and Practice*. Thames&Hudson
2018	*Neri&Hu Design and Research Office: Works and Projects*. Park Books

Key Awards

2022	Architizer A+ Awards Jury Winner, Architizer, USA
2021	Dezeen Awards Architecture Studio of the Year, Dezeen, UK
2021	Lifetime Achievement Awards, Frame, the Netherlands
2020	The Madrid Design Festival Award, Spain
2014	Designer of The Year, Wallpaper* Magazine, London, UK

Nathan Hume

Courses Taught

	University of Pennsylvania
	Associate Professor
2023	ARCH 602, ARCH 701, ARCH 707, ARCH 521, ARCH 522, ARCH 621, ARCH 791

Educational Credentials

	Yale University
2006	Master of Architecture
	The Ohio State University
2003	Bachelor of Science in Architecture

Teaching Experience

	University of Pennsylvania
2013 – present	Associate Professor of Practice, Coordinator of Visual Studies
	Pratt Institute
2011 – 2020	Visiting Assistant Professor
	Yale University
2012 – 2018	Critic
	Texas A+M
2018	Distinguished Professor

Professional Experience

	Hume Architecture
2018 - present	Principal
	Hume Coover Studio
2008 - 2018	Principal
	SuckerpunchDaily.com
2007 - present	Founder + Editor
	Gage/Clemenceau Architects
2005 - 2008	Project Manager

Licenses/Registration

2019 - present	**Registered Architect**, New York
2022 - present	**Registered Architect,** Texas

Selected Publications and Recent Research

Forthcoming	"Material Undecidability." Purple Architecture edited by Ebrahim Poustinchi, James Kerestes and Vahid Vahdat, AR+D Publishing.
Forthcoming	*Vogafjos Greenhouse*, Digital Decoys: An Index of Architectural Deceptions, edited by Constance Vale, Actar.
2022	*Re-Make/Re-Model, Lake Baths, Black Sheep, Down by the River, Inscriptions: Architecture Before Speech*, edited by K. Michael Hays and Andrew Holder
2022	"Material Tension." Antaganismos, volume 12
2021	"Retrofuturism." Constructs, Fall
2020	"On Default." Paprika, volume 06, issue 1
2020	"Material Difference." *See/Saw*, issue 2
2018	"Adjacencies." *Adjacencies*, Yale School of Architecture, edited by Nina Rappaport, pp. 5-17.
2018	"Glimmering Wildness." *Play with the Rules*, Association of Collegiate Schools of Architecture, Milwaukee, Wisconsin
2016	"Glitched Spaces." *Project: A Journal for Architecture*, Issue 5, pp. 12-17.
2016	"Foreword," *Hatch: On the State of the Quick Image*, pp. 4-5.
2013	"Knotted Space." *Project: A Journal for Architecture*, Issue 2, pp. 12-13.

Hina Jamelle

Courses Taught

University of Pennsylvania
Associate Professor of Practice

2021- Design Studio MSAAD
2017- Design Studio VI
2011- Design Studio III
2007-2016 Design Studio IV
2017-2022 Architecture and the New Elegance Seminar
2011-2013 Visual Studies

Educational Credentials

University of Michigan. Ann Arbor, MI
1997 Master of Architecture.
Denison University. Granville, OH.
1993 Bachelor of Arts.

Teaching Experience

University of Pennsylvania
2022- Associate Professor of Architecture.
2014-2022 Senior Lecturer
2011-2014 Full Time Lecturer
2007-2011 Lecturer
Graduate Architecture and Urban Design [GAUD], Pratt Institute.
2014-2018 Visiting Associate Professor
2006-2013 Visiting Assistant Professor
University of Michigan. College of Architecture and Urban Planning.
2016 Schafer Visiting Practice Professor
1994-1997 Teaching Assistant

Professional Experience

Contemporary Architecture Practice. New York and Shanghai.
2003- Director
Razorfish Inc. New York, NY.
2000-2002 Partner
Partners Architects. Philadelphia. PA.
1998-2000 MGA
Zaha Hadid Architects. London. UK
1994-1995 Architect

Selected Publications and Recent Research

2022 *Hybrids and Haecceties*: Co Chair and Editor. Paper and Project Proceedings of the 42nd Annual Conference Association of Computer Aided Design in Architecture. ACADIA. University of Pennsylvania.
2021 *UNDER PRESSURE*. Essays on Urban Housing. Editor. Routledge, London. UK.
2020 *IMPACT.* Co-Editor. Architectural Design, Academy Editions/John Wiley and Sons Inc., London.
2016 *Elegant Transformations: The Tall Building In Shanghai, China.* University of Michigan College of Architecture.
2007 *Elegance*. Co-Editor. Architectural Design, Academy Editions/John Wiley and Sons Inc., London.

Simon Yoo-Hyun Kim

Courses Taught

University of Pennsylvania
Assistant Professor

2014 – pres	ARCH602	Comprehensive Studio
2015 – pres	ARCH701	Options Studio
2009 – 2015	ARCH501	Core Studio
2009 – pres	ARCH724	Research Seminar

Educational Credentials

Massachusetts Institute of Technology
2006– 2008 Master of Science
The Architecture Association
2001 – 2003 Master of Architecture and Urbanism, with thesis honors

Teaching Experience

University of Pennsylvania
2017 – pres Associate Professor of Architecture
2009 – 2017 Assistant Professor of Architecture

Professional Experience

University of Pennsylvania
2009 – pres **Immersive Kinematics Lab**, Director
2009 – pres **IK Studio**, Principal
2007 – 2008 **Gehry Partners**
2003 – 2007 **Zaha Hadid Architects**

Licenses/Registration

2018 – pres **Massachusetts Board of Architects, USA**, License: 951604
2018 – pres **Ontario Association of Architects, Canada**, License: 5995
2000 – pres **California Architects Board, USA**, License: C28234

Selected Publications and Recent Research

2023 – 2028 **National Science Foundation**, CCRI, $738,000
Mark Yim (PI)
2023 **Sachs Program for Arts and Innovation**, $25,000
Artist in Residency with Vanessa Keith
2015 - 2020 **National Science Foundation**, CISE, $750,000
Co-PI with Mark Yim, Maja Mataric (PI), Ross Mead
2017 **Temple University Presidential Humanities and Arts Research**, $15,000
With Andrew Wit (PI)
2015 **The Social Sciences and Humanities Research Council of Canada**, $436,500
Co-PI withJason Johnson (PI), Mariana Ibanez
2015 **The Pew Center for Arts and Heritage**, 60,000
Lembit Beecher (PI), Youngmoo Kim, Mark Yim

Professional Memberships

2000 – pres **American Institute of Architects**, Member: 30135629
2000 – pres **National Council of Architectural Registration Boards**, Certificate 52219
2016 – pres **Institute of Electrical and Electronics Engineers (IEEE)**, Member: 293796

NAAB

Ferda Kolatan

Courses Taught

University of Pennsylvania
Associate Professor
2023 ARCH 701, ARCH 704, ARCH 744

Educational Credentials

Columbia University, Graduate School of Planning and Preservation
1995 MS.AAD
Rheinisch-Westfälische Hochschule, RWTH Aachen, Germany
1993 Dipl.Ing. (Architecture)

Teaching Experience

University of Pennsylvania
2021-present Associate Professor of Architecture
2016-2021 Associate Professor of Practice
2004-2016 Lecturer
University of Virginia, School of Architecture
2020 T. Robertson Visiting Professor
Southern California Institute for Architecture
2015-2019 Visiting Critic
Pratt Institute, Grade Architecture & Urban Design
2002-2019 Visiting Associate Professor
University of Innsbruck, Institute of Urban Design
2013-2020 Visiting Professor
Cornell University, Architecture Art Planning
2012 Visiting Critic
Washington University, Sam Fox School of Design
2011 Visiting Professor
Columbia University, GSAPP
2000-2002 Adjunct Assistant Professor

Professional Experience

SU11 Architecture + Design, Brooklyn, New York
1999-present Founding Director
Smith-Miller+Hawkinson Architects, New York, NY
1995-2000 Architect

Licenses/Registration

Registered Architect, Germany

Selected Publications and Recent Research

2024, expected *Misfits & Hybrids, New Architectural Artifacts for the 21 st Century*, under contract with Routledge
2023 *Fake Architecture, Real Image*. Spatio-Cinematic Betwixt. Vahid Vahdat & James Kerestes, Eds. Intellect Books, Bristol, UK
2022 *Encounter with Morphosis*. Models. Modeled Work by Morphosis. Rizzoli, NYC, NY
2022 *Real Fictions*. Architecture, Futurability and the Untimely. Ingrid Mayrhofer-Hufnagl, Ed. Columbia University Press, NYC, NY
2020 *The Chunk Model*. LOG 50, Model Behavior, Fall
2022 *Genuine Hybrids: Towards an Architecture with No Origin*. AD Vol 90, Impact
2019 *In Pursuit of the Allusive Object*. Aesthetics Equals Politics: New Discourses Across Art, Architecture, and Philosophy. Mark Foster Gage, Ed. MIT Press, Cambridge, MA
2010 *Meander: Variegating Architecture*. Bentley Institute Press, Exton, PA

Professional Memberships

Collective Action for Readiness, Recovery, and Resilience (CARRRE)
Founding Member

NAAB

Fernando Luiz Lara

Courses Taught

University of Pennsylvania
Professor
2023 History and Theory I
2023 History and Theory III

Educational Credentials

University of Michigan
2001 Ph.D. Architecture History and Theory concentration
1998 M.Sc. Architecture
Universidade Federal de Minas Gerais, Brazil
1996 M.A. Semiotics
1993 B.Arch. Architecture and Urban Planning

Teaching Experience

University of Pennsylvania
2023 - present Professor of Architecture
University of Texas, School of Architecture
2009 - 2023 R.G. Roessner Centennial Professor of Architecture
2018 - 2023 Director of the PhD Program in Architecture
2012 - 2015 Chair of the Brazil Center, Lozano Long Institute for Latin American Studies
Universidade de São Paulo, Instituto de Estudios Brasileiros
2017 Visiting Professor
University of Michigan
2004 - 2009 Assistant Professor of Architecture

Licenses/Registration

1993 - present **Registered Architect**, Brazil: CAU # A88347-6

Selected Publications and Recent Research

2024, expected Spatial Theories for the Americas, book under contract with University of Pittsburgh Press
2022 Street Matters: A Critical History of Twentieth-Century Urban Policy in Brazil w/ Ana Koury, University of Pittsburgh Press
2018 Excepcionalidade do Modernismo Brasileiro / Excepcionalidad del Modernismo Brasileño, São Paulo: Romano Guerra Editora, (bilingual edition, Portuguese / Spanish)
2015 Modern Architecture in Latin America: Art, Technology and Utopia, w/ Luis Carranza, UofT Press
2008 The Rise of Brazilian Popular Modernism, University Press of Florida
2020 - 2023 **Books Edited**
Issue 36 of *Revista DEARQ* – Barajar el canon, (F. Martinez Nespral and I.Quintana, co-editors)
Spatial Concepts for Decolonizing the *Americas* (Felipe Hernández, co-editor)
Decolonizing the Spatial History of the Americas – Center 24
Apuntes sobre Decolonización: Arquitectura y Ciudad en Las Americas (with Reina Loredo)
Peer-reviewed Articles
2022 "Cobogó and the Coloniality of the Brise-Soleil: Islamic Roots and Marginalization in Brazilian Modern Architecture", *Journal of Latin American and Latinx Visual Culture, Vol. 4, Number 3, pp. 113–119.*
2022 "What Frameworks Should We Use to Read the Spatial History of the Americas?" Roundtable editor introduction, *Journal of the Society of Architectural Historians, 81/2, June of 2022, pp. 134-136.*
2020 "American Mirror: the occupation of the "new world" and the rise of architecture as we know it*", The Plan Journal, vol 5, n.1, May 2020.*

Professional Memberships

2011 - present **Society of Architectural Historians**
2019 - present **NOMA – National Organization of Minority Architects**

Daniel Markiewicz

Courses Taught

	University of Pennsylvania
	Associate Professor of Practice
2017-2023	Arch 501 – First Year Studio March I
2029-2023	Arch 602 - Second Year Studio March I
2021-2023	Arch 521 – Visual Studies First Year Fall – March I
2021-2023	Arch 522 – Visual Studies First Year Spring – March I
2021-2023	Arch 621 – Visual Studies Second Year Fall – March I

Educational Credentials

	Yale University
2011	Master of Architecture
	Princeton University
2006	Bachelor of Science in Engineering in Civil Engineering – Architectural Focus

Teaching Experience

	University of Pennsylvania
2023-present	Associate Professor of Practice
2017-2023	Lecturer

Professional Experience

	FORMA Architects pllc.
2017-present	Principal
	Diller Scofidio + Renfro
2012-2017	Associate

Licenses/Registration

2023 -present	**Registered Architect**, Pennsylvania
2018-present	**Registered Architect**, Connecticut
2016-present	**Registered Architect**, New York

Selected Publications and Recent Research

2022	*Mosaic of Unlikely Affinities* - ACADIA Conference Exhibition – University of Pennsylvania Weitzman School of Design – FORMA exhibited the ongoing research “Proto Plans”
2022	Atlantic Beach Boardwalk Competition – City of Atlantic Beach, NC, USA - *2nd Place*
2022	“Denver House Renovation”, Architectural Record, February 2022, print and online.
2022	Best Future House Award of the Year – Global Design News, Miami House – *Winner*
2021	Best of Design Award – Unbuilt Category – Architect’s Newspaper - Pink Thermal Baths - *Winner*
2021	“Pink Thermal Baths”, The Architect’s Newspaper, December 2021, print and online.
2015	“Telcel Theater” *Project: A Journal for Architecture*, Issue 4, Winter 2015, print.
2014	“Aargauer Kunsthaus Museum” *Project: A Journal for Architecture*, Issue 3, Spring 2014, print.
2012	“Tip of the Totem” *Project: A Journal for Architecture. Issue 1*, Fall 2012, print.

Laia Mogas-Soldevila

Courses Taught

University of Pennsylvania
Assistant Professor

2021-2023 Design Studio I
2021-2023 New Materials and Methods Research Seminar
2021-2023 Inquiry into Biomaterial Architectures: Development
2021-2023 Inquiry into Biomaterial Architectures: Fabrication

Educational Credentials

Tufts University
2020 Doctor of Philosophy in Interdisciplinary Studies: Biomedical Engineering
Massachusetts Institute of Technology
2016 Master of Science in Media Arts and Sciences
2014 Master of Science in Design Computation
Polytechnic University of Catalonia
2009 Diploma Architect

Teaching Experience

University of Pennsylvania
2021-present Assistant Professor
Cornell University
2019-2018 Lecturer
Massachusetts Institute of Technology
2014-2016 Instructor

Professional Experience

Mogas-Soldevila Arch&Eng SL, Architect
2006-2011 Partner
DumoLab Studio / Matilda Labs Inc, Designer
2009-2021 Co-Founder

Licenses/Registration

2009-present **Registered Architect**, Europe

Selected Publications and Recent Research

2023 Multiscale Design of Biologically Active Structures - Frontiers in Bioengineering Journal
2023 Bio-printed Buildings – Chapter in Additive Manufacturing Perspectives
2022 Low Energy Adaptive Biological Skins from Nature to Buildings - Chapter in Springer Nature
2022 Additively Manufactured Leather-like Silk Protein Materials – Elsevier Materials & Design Journal
2021-present Director, DumoLab Research, University of Pennsylvania

Joan Ockman

Courses Taught

	University of Pennsylvania
	Adjunct Professor
2021, ’23, ’24	History of Architecture from World War II to the Twenty-First Century
2020 - 2023	History of Architecture from 1850 to World War II
2021, ’24	New York as Model: Rethinking the Urban Ideas of Lewis Mumford, Robert Moses, Jane Jacobs, & Rem Koolhaas
2021, ’23	The Concept of an Avant-Garde in Architecture

Educational Credentials

	Cooper Union School of Architecture
1980	Bachelor of Architecture
	Harvard University, Cambridge, MA
1974	Bachelor of Art

Teaching Experience

	University of Pennsylvania
2023 - present	Adjunct Professor
2016 - 2022	Distinguished Senior Lecturer
	Yale School of Architecture, New Haven
2020 - present	Vincent Scully Visiting Professor of Architectural History & Director of Doctoral Studies
	Cooper Union
2013 - present	Professor Adjunct

Professional Experience

	Richard Meier and Partners
1980 - 1981	Associate
	Peter Eisenman Architects
1978	Consultant and collaborator on project for Venice Biennale

Selected Publications and Recent Research

Forthcoming	*Architecture Among Other Things: Essays by Joan Ockman, 1988-2024*
Forthcoming	*Architecture since 1850* Coauthor w/ Robin Middleton & Mary McLeod
2023	*An Orchid in the Land of Technology*. ARQ Ediciones
2022	“Toward a Political Ecology of Architecture” *Places*; keynote lecture, University of Sidney (2020)
2022	“A Tale of Two Villages: Jane Jacobs, Marshall McLuhan and Their Visions of Collective Life.” In P. Lewis et al. eds., *Architecture and Collective Life*; keynote lecture, Architectural History Research Association (2019)
2020	“Paradoxes of Progress.” In K. Britton & R. McCarter, eds., *Modern Architecture and the Lifeworld: Essays in Honor of Kenneth Frampton*
2023	“Whose Modernism?” Keynote lecture, Alvar Aalto Institute conference, Jyväskylä, Finland
2019	“On the Future History of Modern Architecture.” Keynote lecture, Society of Architectural Historians Annual Meeting
2019	“The Emergence of Team 10 out of the Twentieth Century.” Keynote lecture, University of Porto
2017	“Slashed (On the Use and Abuse of Architectural Research).” *e-flux Architecture*
2014	MAS: The Modern Architecture Sympo*sia, 1962-1966. A Critical Edition.* Edited w/Rosemarie Haag Bletter

Professional Memberships

2017 - present	**Scientific Committee**, *City, Culture and Creative Practices* journal
2017 - present	**Scientific Committee**, *HPA: Histories of Postwar Architecture* website
2016 - present	**Editorial Board**, *AJAR: Arena Journal of Architectural Research*
2013 - present	**Advisory Board**, *Manifest: A Journal of Architecture and Urbanism*
2008 - present	**Academic Board**, DASH (Delft Architectural Studies on Housing)
2003 - present	**Editorial Advisory Board**, *The Architect’s Newspaper*

Ali Rahim

Courses Taught

University of Pennsylvania

	Professor of Architecture
	Spring 2024
Fall 2023	Arch 7040 - Elective Design Studio
	Arch 7030 - MSD- Advanced Architecture Design, Design Studio
	Arch 7410 - Design Innovation
Spring 2023	Arch 7040 - Elective Design Studio
Fall 2022	Arch 7030 - MSD- Advanced Architecture Design, Design Studio

Educational Credentials

	Columbia University
1996	March. with Design Honors
	University of Michigan
1987	B Science.

Teaching Experience

	University of Pennsylvania, Weitzman School of Design
2014 - present	Director Post Professional, now Master of Science in Design, Advanced Architecture Design Program
2011 - present	Professor of Architecture
2006 - 2011	Associate Professor.
	The University of Applied Arts, Vienna.
2008 - 2009	Zaha Hadid Visiting Professor.
	Yale University
Spring 2007	Louis I Kahn Chair.
	Harvard University
Fall 2006	Visiting Professor

Professional Experience

	Contemporary Architecture Practice
2014 – present	Director, Shanghai
1999 - present	Director, New York

Selected Publications and Recent Research

2024	Co-Author with Hina Jamelle, Catalytic Forms. Routledge, London. Forthcoming. 330 Pages.
2024	Editor, Future Offices. ORO Editions, Los Angeles, CA. Forthcoming May 2023.224 Pages. Author. “Future Offices and their Architectural Impact”, Author. “Future Offices Interdisciplinary Projects”, Author. 22 Pages Total.
2020	Editor, Future Airports. ORO Editions, Los Angeles, CA. December 2020. 284 Pages. Author. “Future Airports and Logistics Hubs”, Author. “Deep Aesthetics. A Cultural Design Process”, Author. “Future Airports Projects”, Author. 26 Pages Total.
2020	Co-Editor with Hina Jamelle, Impact. Architectural Design Profile 05 No.90, Academy Editions/ John Wiley and Sons Inc., London. October 2020. 125 Pages. Co-Author. “Architectural Impact after the Digital”, Co-Author. “Disjunctive Continuity and the Aesthetics of the Seam”, Co-Author. 18 Pages.
2018, 2016	Editor, Asset Architecture 1, 2 and 3. ORO Editions, Los Angeles, CA. Author. “Introduction to Asset Architecture”, Author. “On Aesthetics”, Author. “Beyond Technique”, Author. “Asset Architecture Projects”, Author. 42 Pages.

Mette Ramsgaard Thomsen

Courses Taught

2023-2024 ARCH 7040 Design Studio 2023 and 2024

Educational Credentials

Bartlett School of Architecture and Department of Computer Science, University College London.

1999 –2004 Interdisciplinary PhD

1994 – 1996 MA, Masters in Architecture (distinction)

Teaching Experience

Royal Danish Academy Architecture, Design and Conservation

2012 – to date Full Professor of Architecture and Digital Technologies, Head of CITA, Centre for Information Technology and Architecture. https://royaldanishacademy.com/CITA

Royal Academy of Fine Arts, School of Architecture

2005 – 2010 Associate professor and Head of CITA, Centre for Information Technology and Architecture,

2012– 2014 Initiated, developed and ran CITA Studio: a research-led Masters in Computation in Architecture https://royaldanishacademy.com/master-computation-in-architecture The masters is ongoing and I continue to teach within the programme.

Bartlett School of Architecture, University College London

2003 – 2005 College tutor

School of Architecture and Design, University of Brighton

2001 – 2005 Senior Lecturer

Licenses/Registration

Member of the Danish Architects' Association, registration in Denmark.

Selected Publications and Recent Research

https://orcid.org/0000-0002-3093-8556

With 84 conference papers, 16 journal papers, 18 contributions to anthologies and 5 monographies I have published extensively within my research domain. I list here selected 5 key publications.

2022 Ramsgaard Thomsen M, Tamke M. "Towards a transformational eco-metabolistic bio-based design framework in architecture", Bioinspiration & Biomimetics, Volume 17, Number 4,

2022 Ramsgaard Thomsen M, "Computational design logics for bio-based design", Architectural Intelligence, (2022) 1:13, Springer Oct 2022

2020 Ramsgaard Thomsen, M., Tamke, Ayres, P., Nicholas, P. CITA Complex Modelling, Riverside Architectural Press, First edition

2023 Nicholas, P., Lharchi, A., Tamke, M., Valipour Goudarzi, H., Eppinger, C., Sonne, K., Rossi, G., & Ramsgaard Thomsen, M. Biopolymer composites: Malleable materials for an instable architecture. Acadia23 :

2022 Rossi, G., Chiujdea, R., Colmo, C., El Alami, C., Nicholas, P., Tamke, M., & Ramsgaard Thomsen, M. "A material monitoring framework: Tracking the curing of 3d printed cellulose-based biopolymers." I K. Dörfler, S. Parascho, & J. Scott (red.), Realignments: Toward Critical Computation: Proceedings of the 41st Annual Conference of the Association for Computer Aided Design in Architecture (s. 308-317)

Eduardo Rega Calvo

Courses Taught

University of Pennsylvania
Lecturer

2014-2023	Design Studio I & Design Studio II
2022	Advanced Studio IV
2021-2022	Topics in Architecture Theory I
2019-2021	Topics in Architecture Theory II

Educational Credentials

	Columbia University
2012	Master of Science in Advanced Architectural Design
	Escuela Tecnica Superior de Arquitectura de Madrid
2010	Master of Architecture and Phd program
	Escuela Tecnica Superior de Arquitectura de Las Palmas
2008	Bachelor of Architecture

Teaching Experience

	University of Pennsylvania
2013-present	Lecturer
	Cornell University
2023	Visiting Critic
	Pratt Institute
2013-2017	Visiting Assistant Professor

Professional Experience

	Interim Studio
2019-present	Principal co-founder
	ADEPT Architects
2008	Designer/Architect
	Casariego/Guerra
2005-2007	Designer/Architect

Licenses/Registration

2008-present **Registered Architect**, Las Palmas de Gran Canaria, Spain

Selected Publications and Recent Research

2023	Participant and Exhibitor, Chicago Architecture Biennial
2023	Symposium co-organizer, Housing Justice Futures.
2022	“Public Schools as Equity Infrastructure”, Context Magazine, AIA Philadelphia
2018	Co-editor, Structural Instabilities: History, Environment, and Risk in Architecture

Philip Ryan

Courses Taught

University of Pennsylvania
Senior Lecturer

2023
ARCH 5310 - Construction 1 (graduate)
ARCH 4310 - Construction 1 (undergrad)
ARCH 4990 - Construction/Structures Lab
ARCH 6710 - Professional Practice 1: The Project
ARCH 7710 - Professional Practice 2: The Practice
ARCH 7320 - Seminar: Heavy Architecture

Educational Credentials

University of Texas at Austin
1999 Bachelor of Architecture

Teaching Experience

University of Pennsylvania
2013 - present Lecturer and Senior Lecturer

Rhode Island School of Design
2007 Advanced Studio Instructor

City College of New York
2005 Graduate Studio Instructor

University of Texas at Austin
1998 Summer Program Studio Instructor

Professional Experience

Studio Modh Architecture
2013 - present Principal and Founder

Tod Williams Billie Tsien Architects
1998 - 2013 Staff, Project Architect, and Senior Associate

Christoff:Finio Architecture
1998 Staff

Miro Rivera Architects
1998 Staff

Danze and Blood Architects
1993 - 1997 Staff

Brooklyn Digital Foundry
1998 - 2008 Founding Partner

Licenses/Registration

2012 **Registered Architect** in NY, NJ, PA, CT
2013 **NCARB Certification**

Professional Memberships

AIA

Andrew Saunders

Courses Taught

University of Pennsylvania
Associate Professor

2024 7040 Advanced Studio (Elective): Into the Sublime: Immersion into the Scottish Highlands
2023 7120 Baroque Parameters: Topics in Architecture Theory II
2023 5020 Studio II, Coordinator

Educational Credentials

Harvard Graduate School of Design, Harvard University
2004 Master in Architecture, Graduating Award: Distinction for work of clearly exceptional merit
Fay Jones School of Architecture, University of Arkansas
1998 Bachelor of Architecture: Graduating Award: Magna Cum Laude

Teaching Experience

University of Pennsylvania, Philadelphia, PA
2014-Current Associate Professor (Tenured),
Associate Chair of the Department of Architecture
Director of the Master of Architecture Professional Degree Program
Rensselaer Polytechnic Institute, Troy, NY
2009-2014 Associate Professor (Tenured), Head of Graduate Studies
Cranbrook Academy of Art, Bloomfield Hills, MI
2006-2007 Visiting Lecturer
The Cooper Union Irwin S. Chanin School of Architecture, New York, NY
2001-2002 Adjunct Professor

Professional Experience

Andrew Saunders Architecture + Design, Philadelphia, PA
2004-present Founder and Principal
Preston Scott Cohen Architects, Cambridge, MA
2002-2004 Lead Project Designer
Eisenman Architects, New York, NY
1998-2002 Lead Project Designer
Thomas Leeser Architects, New York, NY
1999-2000 Lead Project Designer

Selected Publications and Recent Research

2024 Chapter: *Baroque Topologies, The Productive Futility of 1:1 Representation* in “A purple Architecture”
2024 Paper: *Deep Relief: Integrating Convolutional Neural Networks & Industrial Robotic Hot-wire Fabrication of Ruled Surfaces:* ACADIA 2022 Hybrids and Haecceities
2022 Paper: Deep Relief: Painterly in the Age of Brute-Force Computing: Traits of Postdigital Neobaorque
2019 Chapter: *Baroque Topologies* in “[Un]timely Architecture“
2018 Book: *Pavilions: 57 Tessellations*. New York. ORO Editions Applied Research
2017 Book: *Baroque Topologies*. Rome: Palombi Editori

Frederick R. Steiner

Courses Taught

University of Pennsylvania

2017-2024 Environmental Readings
2023 Building Environmental Resilience Studio
2019 Rebooting New England Studio
2017 Pienza Studio

Educational Credentials

University of Pennsylvania

1986 Ph.D. City and Regional Planning
1986 M.A. City and Regional Planning
1973 M.R.P. Regional Planning

University of Cincinnati

1975 M.C.P. Community Planning
1972 B.S.D. Graphic Design

Teaching Experience

2016-present Paley Professor of Landscape Architecture and City Planning, School of Design, University of Pennsylvania
2001-2016 Henry M. Rockwell Chair in Architecture (2004-2016) and Professor, School of Architecture, University of Texas at Austin
1989-2001 Professor, School of Planning and Landscape Architecture, College of Architecture and Environmental Design, Arizona State University
1987-1989 Professor of Urban and Regional Planning, School of Architecture and Planning, University of Colorado at Denver, Denver, Colorado
1983-1984 Teaching Fellow, Co-Instructor of two studios, Department of Landscape Architecture and Regional Planning, University of Pennsylvania
1977-1987 Associate Professor of Landscape Architecture and Regional Planning, Washington State University, Pullman, Washington

Professional Experience

The Contemporary Austin

2013 Consultant, Master Planner Selection Committee for Laguna Gloria

IBI Group, Toronto

2009-2011 Consultant

Lincoln Institute for Land Policy

2008 Consultant

Licenses/Registration

2016-present SITES Accredited Professional

Selected Publications and Recent Research

2002 Robert Yaro, Ming Zhang, and Frederick Steiner. *Megaregions for America's Future.* Cambridge, Massachusetts: The Lincoln Institute of Land Policy.
2019 Frederick Steiner, Richard Weller, Karen M'Closkey, William Fleming, editors. *Design with Nature Now*. Cambridge, Massachusetts: The Lincoln Institute of Land Policy.
2018 Frederick Steiner. *Making Plans: How To Engage with Landscape, Design, and the Urban Environment.* Austin: The University of Texas Press.

Professional Memberships

2004-Present FASLA, College of Fellows, American Society of Landscape Architects

Robert Stuart-Smith

Courses Taught

University of Pennsylvania
Assistant Professor of Architecture & Program Director, MSD Robotics & Autonomous Systems (MSD-RAS)

2017-2023 ARCH636 Material Formations (M.ARCH)
2017-2018 ARCH704: Design Studio (M.ARCH)
2018-2019 ARCH602: Design Studio (M.ARCH)
2018-2023 ARCH701: Design Studio (M.ARCH)
2020-2023 ARCH802: MaterialAgencies: Robotics & Design Lab (MSD-RAS)

Educational Credentials

Architectural Association School of Architecture
2008 MA Architecture (Post-Professional)
University of Canberra
2001 BA. Architecture (RAIA Top Graduating Student Medallion)
1998 BA. Applied Science in Environmental Design
L'école D'architecture Val de Marne Paris, France
1999 5th year of architecture degree – international exchange

Teaching Experience

University of Pennsylvania
2017-present Assistant Professor of Architecture & Program Director, MSD Robotics & Autonomous Systems (MSD-RAS)
GRASP Affiliate Faculty, School of Engineering & Applied Science
Director of the Autonomous Manufacturing Lab (AML-PENN)
University College of London Computer Science (UCL-CS), UK
2016-present Principal Research Associate (part-time) & Co-Director of the Autonomous Manufacturing Lab (AML-UCL)
Architectural Association School of Architecture, UK
2009 — 2016 Studio Course Master
University of Innsbruck, Austria
2015 Guest Professor in Architectural Technology

Professional Experience

Robert Stuart-Smith Design Ltd, Architectural Practice, London, UK
2013 — Present Co-Director
Kokkugia LLP (Australia + UK)
2004 — 2013 Co-Director
Arup, Advanced Geometry Unit (AGU), UK.
2008 — 2011 Algorithmic Design Consultant to Cecil Balmond
Grimshaw Architects (Melbourne, London, New York)
2003 — 2006 Senior Architect
Lab Architecture Studio, Melbourne, Australia
2001 — 2003 Architect

Selected Publications and Recent Research

2024 "Behavioural Production: Semi-Autonomous Approaches to Architectural Design, Robotic Fabrication and Swarm-Based Construction", *Routledge* (Book, contracted).
2023 Proceedings of the 42nd *ACADIA*: Hybrids and Haecceities. IngramSpark, 2023 (Proceedings Book).
2022 "Aerial additive manufacturing with multiple autonomous robots". *Nature*, 609(7928), 709–717.
2019 "A Review of Collective Robotic Construction". *Science Robotics*. 4, eaau8479 (2019)
2016 "Behavioural Production: A Swarm Constructed Architecture", *AD Architectural Design*
Research Funding
2023 Penn URF for "Autonomous: Architectural Design and Robotic Construction", $62,025
2019 Penn-Cemex Multi-Year Research Collaboration, $375,000
2018 Autonomous Multi-Robot Collective Construction, £1.2m + £600k Industry Support
2016 Aerial Additive Manufacturing, £2.4m + £500k Industry Support

Eric Teitelbaum

Courses Taught

University of Pennsylvania
Visiting Lecturer
2023-present Environmental Systems II

Educational Credentials

Princeton University
2020 Ph.D. in Architecture and Material Science
2017 Master of Science in Engineering in Civil Engineering
2014 Bachelor of Science in Engineering in Chemical and Biological Engineering

Teaching Experience

University of Pennsylvania
2023-present Visiting Lecturer
The Cooper Union
2022-present Adjunct Assistant Professor

Professional Experience

AIL Research, Inc.
2020-present Senior Scientist
ETH Zurich
2018-2019 Research Assistant and Project Manager
Princeton University
2015 – 2016 Research Assistant

Selected Publications and Recent Research

2020 Teitelbaum, E., Chen, K. W., Aviv, D., Bradford, K., Ruefenacht, L., Sheppard, D., ... & Rysanek, A. (2020). Membrane-assisted radiant cooling for expanding thermal comfort zones globally without air conditioning. Proceedings of the National Academy of Sciences, 117(35), 21162-21169.

2000 Teitelbaum, E., Jayathissa, P., Miller, C., & Meggers, F. (2020). Design with Comfort: Expanding the psychrometric chart with radiation and convection dimensions. Energy and Buildings, 209, 109591.

2020-present Affiliated Researcher, Thermal Architecture Lab, University of Pennsylvania
2021 US Patent No. 10718670: Scanning Motion Average Radiant Temperature Sensor
2023 US Patent No. 11815287: Thermally Radiative Apparatus and Method

Professional Memberships

2017-Present **ASHRAE Member** (American Society of Heating, Refrigeration and Air-Conditioning Engineers)

Franca Trubiano

Courses Taught

	University of Pennsylvania
	Graduate Group Chair of the PhD Program in Architecture & Associate Professor
2009-2023	ARCH 5320- Construction Technology II (w/BIM Labs), Core Technology course
Spring 2023	ARCH 8120 – Methods in Architectural Research (PhD Required Course)
Fall 2022	ARCH6310 – D^3 Details, Data and Delivery (Core Technology Course)

Educational Credentials

	University of Pennsylvania
2005	Ph.D.
	McGill University
1995	M.Arch, Architectural Theory
1988	B.Arch, Graduated with Distinction

Teaching Experience

	University of Pennsylvania
2016 - present	Associate Professor
2009 - 2015	Assistant Professor
	Georgia Institute of Technology, College of Architecture, Atlanta GA
2004 - 2009	Assistant Professor and Visiting Assistant Professor
	Clemson University, School of Architecture, Clemson SC
2003 - 2004	McMahan Visiting Associate Professor
	University of Pennsylvania and Drexel University
1997 - 2003	Studio Instructor and Adjunct Professor

Professional Experience

1993	Arcop and Associates, Montreal Canada
1989 - 1992	Bobrow/Feldman Architects, Montreal Canada
1988	Fiset Miller Architects, Montreal, Ca + Brian Elsden Burrows Architect, Montreal, Canada

Licenses/Registration

Since 1990	Province of Québec, Ordre des Architectes du Québec, with Distinction
2010 - 2016	A.I.A. (American Institute of Architects), International Associate

Selected Publications and Recent Research

2024	Trubiano, Franca; Kolber, S.; Llor, M.; Farrow, A.; Fuentes, M., *Bio/Matter/Techno/ Synthetics: Design Futures for the More than Human* (ACTAR, 2024)
2023	Trubiano, Franca. *Building Theories, Architecture as the Art of Building* (Routledge, 2023)
2020-2021	PERRY WORLD HOUSE, Penn Faculty Workshop Grant "Forced Labor, Urban Migration, and the Built Environment: Eradicating Supply Chain Slavery in the Building Industry?" ($20,000)
2019	Trubiano, Franca; Adlkaha, Ramona; Bartuskaite, Ramune, *Women [Re]Build: Stories, Polemics, Futures* (ORO Press, ar+d, 2019)
2018-2022	H+U+D, Humanities + Urban Design Colloquium, "Building the Inclusive City: "Risks and Social Justice for Immigrant Work in the Construction Industry." ($24,100).
2012	Trubiano, Franca. Ed. *Design and Construction of High-Performance Homes; Building Envelopes, Renewable Energy and Integrated Practice, (Routledge Press, 2012)*
2011 - 2013	Investigator, Energy Efficient Building Hub (EEBHUB) US Department of Energy (DOE) Task 9.2 "Deploying Integrated Design Roadmaps for Advanced Energy Retrofits," ($500,000).

Professional Memberships

2021 - present	Editor and Editorial Board Member, Context: The Journal of AIA Philadelphia
2016 - present	BEEnowSM, Built Environment Education, now, Board Member, https://www.beenow.org
2015 - 2013	President, Treasurer, and Secretary, BTES–Building Technology Educators Society, https://btes.org/
2013 - 2016	Editorial Board Member, JAE – Journal of Architectural Education

NAAB

Marion Weiss

Courses Taught

	University of Pennsylvania
	Graham Chair Professor of Practice
2019–Present	ARCH701: Design Research Studio: Cross-Disciplinary Focused Investigations

Educational Credentials

	Yale University
1984	Master of Architecture
	University of Virginia
1979	Bachelor of Science in Architecture

Teaching Experience

	University of Pennsylvania
2019–Present	Graham Chair Professor of Practice
2006–2019	Graham Chair Professor of Architecture
	Yale University School of Architecture
2015	Eero Saarinen Visiting Professor
	Harvard University Graduate School of Design
2011	Visiting Critic: Graduate Studio
	University of Pennsylvania
1997–2006	Associate Professor
1991–1997	Assistant Professor
	Cornell University School of Architecture
1995	Gensler Distinguished Visiting Critic
	Yale University Graduate Studio
1995	Visiting Critic: Advanced Graduate Studio
	University of Maryland, School of Architecture
1988–1991	Assistant Professor
	Yale University, School of Architecture
1982–1983	Teaching Assistant

Professional Experience

1989–Present	**WEISS/MANFREDI Architecture/Landscape/Urbanism**
Prior experience	**César Pelli & Associate**
	Mitchell Giurgola Architects

Licenses/Registration

Registered Architect, State of New York

Selected Publications and Recent Research

2024	*Drifting Symmetries*, Forthcoming from Park Books
2020	*U.S. Embassy New Delhi: Weiss/Manfredi*, Published by Original Copy
2016	*Converging Territories*, Published by Actar Publications
2015	*Public Natures: Evolutionary Infrastructures*, Published by Princeton Architectural Press
2013	*Evolutionary Infrastructures*, Published by Harvard Graduate School of Design
2012	*Pro Architect: Weiss/Manfredi,* Published by Archiworld
2007	*Weiss/Manfredi: Surface/Subsurface*, Published by Princeton Architectural Press
2000	*Site Specific: The Work of Weiss/Manfredi Architects*, Published by Princeton Architectural Press

Professional Memberships

American Institute of Architects
The Architectural League of New York
American Society of Landscape Architects, Affiliate
Urban Design Forum
United States Department of State Bureau of Overseas Buildings Operations, Industry Advisor
Harvard Graduate School of Design, Design Advisor
Yale School of Architecture, Design Advisor

NAAB

Danielle Michelle Willems

Courses Taught

	University of Pennsylvania
	Senior Lecturer
2023	Arch 501 Studio
	Study Abroad (Apomechanes)
	Arch 602 Studio
	Arch The Function of Fashion in Architecture Seminar
2022	Arch 501 Studio (501 Coordinator and Studio Instructor)
	Study Abroad (Apomechanes)
	602 Studio
	The Function of Fashion in Architecture Seminar
2021	Arch 501 Studio (501 Coordinator and Studio Instructor)
	Digiblast 1 & 2 Summer Prep Workshop (incoming MArch)
	Arch 500 Summer Prep Studio (incoming MArch)
2021	Arch 602 Studio
	The Function of Fashion in Architecture Seminar

Educational Credentials

	Columbia University, New York
2006 – 2007	M.S. Advanced Architectural Design
	Southern California Institute of Architecture
2006 - 2003	dipl. Bachelor of Architecture
	Orange Coast College
2003-1999	degree, associate in arts

Teaching Experience

	University of Pennsylvania
2013 - present	Senior Lecturer

Selected Professional Experience

	Maeta Design llc, Brooklyn, Philadelphia, Athens
2011-present	founding partner
	architectural design, construction & applied computational design research
	Apomechanes & Comput-DIY
2009-present	founding partner
	architectural design, robotic fabrication & film lab | cultural & educational nonprofit organization.
	Serge Studio, New York
2008-2010	founding partner
	architectural design & media branding
	Eyeball NYC, New York
2007-2008	Assistant Producer, Creative Manager, Motiongraphic TV
	commercials and short films
	Touraine+Richmond, Los Angeles
2004-2005	Architectural Designer

Selected Exhibitions & Publications

2018	Venice Architecture Biennale | “Digital Deposition” in Time Space Existence at The Palazzo Bembo
2018	57 Pavilions | Applied Research and Design Publishing, ORO Editions; edited by Andrew Saunders
2015	Chicago Architecture Biennal | Comput-DIY Projects & Films in collaboration with New Territories