

**Columbia University in the City of New York**  
**Graduate School of Architecture, Planning and Preservation**

**Architecture Program Report for 2021 NAAB Visit for  
Continuing Accreditation**

**Master of Architecture: Pre-Professional + 108 credits**

**Year of the Previous Visit:** 2013

**Current Term of Accreditation:** The accreditation term is effective January 1, 2013.  
The program is scheduled for its next accreditation visit in 2021.

Submitted to: The National Architectural Accrediting Board  
Date: 1 March 2021

**Program Administrator:** Amale Andraos, Dean

**Chief Administrator for the Academic Unit:** Amale Andraos, Dean

**Chief Academic Officer of the Institution:** Ira Katznelson, Interim Provost (current)  
Mary C. Boyce, Provost (as of July 1, 2021)

**President of the Institution:** Lee Bollinger, President Columbia University

**Individual submitting the Architecture Program Report:** Danielle Smoller, Associate Dean of  
Academic and Student Affairs

**Name of individual to whom questions should be directed:** Danielle Smoller, Associate Dean of  
Academic and Student Affairs

**Mailing Address for FedEx/UPS Delivery:**

Columbia University  
Graduate School of Architecture, Planning and Preservation  
1172 Amsterdam Avenue  
400 Avery Hall  
New York, New York 10027  
(212) 854-3414

## Table of Contents

<u>Section</u>	<u>Page</u>
<b>Section 1: Program Description</b>	<b>4</b>
I.1.1 History and Mission	5
I.1.2 Learning Culture	7
I.1.3 Social Equity	10
I.1.4 Defining Perspectives	15
I.1.5 Long Range Planning	18
I.1.6 Assessment	22
<b>Section 2: Progress since the Previous Visit</b>	<b>25</b>
Program Response to Conditions Not Met	26
Program Response to Causes of Concern	27
Program Response to Change in Conditions	28
<b>Section 3: Compliance with the Conditions for Accreditation</b>	<b>29</b>
I.2.1 Human Resources and Human Resource Development	30
I.2.2 Physical Resources	43
I.2.3 Financial Resources	53
I.2.4 Information Resources	58
I.2.5 Administrative Structure and Governance	72
II.1.1 Student Performance Criteria	77
II.2.1 Institutional Accreditation	105
II.2.2 Professional Degrees and Curriculum	110
II.3 Evaluation of Preparatory Education	121
II.4 Public Information	124
III.1.1 Annual Statistical Reports	126
III.1.2 Interim Progress Reports	126
<b>Section 4: Supplemental Material</b>	<b>127</b>

**Note:**

A comprehensive Table of Contents can be found in Section 4 of this report: Supplemental Material.

**Section 1: Program Description**

## **I.1.1 History and Mission**

### **A. Mission and History of the Institution**

Columbia University is a world-renowned center of research and a distinctive learning environment for undergraduates and graduate students pursuing a variety of fields. The University recognizes the importance of its location in New York City and connects research and teaching to the vast resources of the city around it. It is committed to supporting a diverse faculty and student body. Columbia University aspires to advance knowledge and learning at the highest level of scholarly and professional excellence and to share the products of its efforts with the world.

A complete history of Columbia University and its founding principles can be found at:  
<https://www.columbia.edu/content/history>.

### **B. Mission and History of the Program**

#### **i. History of the Program**

Columbia's architecture program, one of the first in the United States, was established in 1881 by William R. Ware within the School of Mines. Ware established the founding principles of a professional program at once guided by practicing architects and informed by humanistic learning and scholarship.

Ware saw the school as the synthesis of a Beaux-Arts-inspired professional style and research-based scholarship, with professional and academic work supported by his remarkable research library of drawings, books, lantern slides, casts, and material samples—a collection that would become the Avery Architectural and Fine Arts Library, now the world's leading physical and digital architectural collection. In 1889 Charles McKim established the first traveling fellowship, and in 1902 the architecture program matured into a full-scale School of Architecture. In 1912 the School moved into its new quarters, Avery Hall, and in 1952 the William Kinne Fellows Fellowship Endowment was established, cementing the role of learning through travel.

This dual anchor in research and history as well as in contemporary practical concerns from around the world continues today under the leadership of Dean Amale Andraos, the School's first female dean. Ware's bridge between the professional and the academic continues to manifest itself as practitioners are encouraged to collaborate with researchers and scholars in addressing the crucial issues of our time: climate change, social and racial equity, and the impact of data and technology on the built environment across all its scales.

A complete history of GSAPP and the Master of Architecture program can be found at:  
<https://www.arch.columbia.edu/history>.

#### **ii. Program Mission**

The Master of Architecture (M.Arch) program is committed to the holistic development of young professionals through the integrated study of the liberal arts and architecture. The pedagogical agenda of the M.Arch program combines creative and technical expertise with strong historical and theoretical positions, and trains and equips accomplished practitioners with the tools to reimagine the discipline and the impacts of its practices.

This commitment to educating young professionals extends to the relationship between the M.Arch program and the rest of the School. While the M.Arch program is GSAPP's "flagship" program, the school's other opportunities—seven degree programs ranging from urban planning to real estate, three doctoral programs, and a range of dual degree and non-degree opportunities—are also leaders in their respective fields. Each program benefits, and is benefitted by, the others.

GSAPP is fueled by a diversity of perspectives, cultures, and backgrounds as well as by a spirit of intellectual openness and generosity. The M.Arch program is committed to producing new knowledge about architecture and the built environment and to interrogating the foundations and boundaries of existing knowledge. By questioning the premises, histories, and future directions of the field, the program aims to spark new forms of design scholarship as well as new modes of practice for confronting the challenges of contemporary society. This commitment is at the heart of the M.Arch's mission of cultivating an understanding of architecture as inseparable from the broader questions of our world, and of guiding architecture—as discipline and as practice—towards new creative potentials, expanded modes of practice, and broadened responsibilities.

### **iii. Letter from the Dean**

The program mission is encapsulated in the Letter from the Dean, which appears on the School website and in each year's publication of student work entitled *Abstract*. Currently, this outlines the School's ongoing, interconnected work on Climate, Equity, and Data and Design. The School is also deeply committed to its Anti-Racism Action Plan and to initiatives that will fundamentally reshape the institution in the coming years. The program mission is also elaborated in numerous documents, speeches, and interviews, and repeatedly communicated to prospective students, faculty, and alumni.

The Letter from the Dean can be found at: <https://www.arch.columbia.edu/deans-letter>.

## **C. Integration within the University Setting**

GSAPP is highly integrated into the wider University. The School benefits the institution through its research, open courses, and collaborative teaching, as well as through its reputation as a unique and important venue for public conversation across the campus and the city; and, in turn, benefits from its unique position as part of one of the leading research institutions in the world. GSAPP aims to foster this educational context of reciprocity.

In the past seven years, GSAPP's research capacity and output—particularly that of its architecture program—has grown tremendously. Since 2014, GSAPP has launched the Center for Spatial Research (with significant funding from the Andrew W. Mellon Foundation), the Center for Resilient Cities and Landscapes (funded by the Rockefeller Philanthropy Advisors), the Housing Lab (with funding from the IDC foundation, which also endowed the first professorship in Architecture), and the Post-Conflicts Cities Lab (funded by the Ford Foundation). The School has also seeded research through the Urban Community and Health Equity Lab, the Natural Materials Research Lab, and the Embodied Energy Initiative, as well as through the expansion and renovation of the Technology Preservation Lab and the Making Studio.

These efforts contribute to the broader research capacity of the University and produce interdisciplinary collaborations. The Center for Spatial Research (CSR) recently collaborated with the department of Computer Science and the Brown Institute for Media Innovation at the School of Journalism to support the creation of new curricula dedicated to combining digital innovation with public policy. As part of the Mellon grant, CSR also offered a series of seminars that build on the Center's

research focus and are open to both GSAPP students and the University at large. The Center for Resilient Cities and Landscapes (CRCL) recently formed the Earth Networks 2020 Environmental Justice and Climate Just Cities Network in partnership with a number of schools and departments across Columbia's campus. And in Fall 2019 GSAPP partnered with the Buell Center to launch "Public Works for a Green New Deal," which brought the M.Arch Advanced Studios together with studios from Urban Planning and Urban Design to explore the potential impact of the Green New Deal on the built environment.

Within GSAPP, cross-disciplinary opportunities have significantly increased through joint studios and all-school lecture classes such as the recent Climate, Technology, and Society course offered in Spring 2020. Other architecture courses such as Sick City, Narrative Urbanisms, and Theory of City Form are also open to the broader University, reinforcing the program's culture of disciplinary and institutional exchange.

M.Arch students benefit from full access to all of Columbia University's resources, such as student services and academic and health/wellness support. Students can not only cross-register for classes outside of those offered by the M.Arch curriculum but access the entire University library system. GSAPP students also have access to Columbia student and graduate housing and international students are supported by Columbia's International Student and Scholars Office.

GSAPP's public programs, publications, and exhibitions, which address contemporary issues in architecture, the city, and the environment, contribute to the intellectual life of the University. These initiatives provide opportunities for collaborations at all scales, from interdisciplinary discussions within the School and across Columbia University to external exchanges with partner organizations and peer institutions across New York City, the country, and the world. Weekly lectures and lunch-time discussions or conferences, as well as exhibitions, book launches, film screenings, and special events are open to all, and engage faculty and students across the institution. These initiatives are not only broadcast through Columbia's Public Affairs channels but also regularly featured in Columbia News. To make architectural thinking and expertise more accessible to an interdisciplinary audience, GSAPP hosts select events at highly visible University venues including the Miller Theater, Earl Hall, or The Forum on the new Manhattanville Campus. Recent events include lectures and discussions with architects David Adjaye and Tatiana Bilbao, design curator Paola Antonelli, and the dissident artist Ai Weiwei. Many of these public programs are presented by GSAPP in collaboration with institutional partners such as the School of the Arts or Columbia World Projects. Recently, GSAPP exhibitions also contributed to the University-wide Year of Water initiative led by the School of the Arts with an installation of new work by Torkwase Dyson.

Detailed information about Research, Labs, and GSAPP publications can be found in Section 3 of this report: 1.2.4 Information Resources.

## **I.1.2 Learning Culture**

### **A. Learning Culture and Learning Culture Assessment**

GSAPP provides a positive and respectful learning environment where optimism, respect, collaboration, and engagement are required. Students are supported by a wealth of resources, opportunities, and ways to provide feedback. The program sequence is designed to encourage collaborative thinking among students, peers, and faculty.

**i. Inside the Classroom**

To accomplish its goal of sustaining both the highest standards of professional training and an advanced design research environment, the Master of Architecture (M.Arch) design studio curricular sequence is calibrated to accommodate a diversity of backgrounds—guiding incoming students through a fixed sequence of Core Studios that steadily transitions to an open field of Advanced Studios. In the first semester (Core I), all M.Arch students share the same program, and studio faculty work as a team. In the second semester (Core II), studio faculty share program and site but with different emphases, and students choose their section. In the third semester (Core III), students work in pairs on an assigned collective housing project. In this way, the design curriculum gradually moves from more collective explorations in the Core Studios to more individual experiments in the Advanced Studios. The fourth semester (Advanced Studio IV), which acts as a hinge, typically focuses on a large-scale building in a rural site—enabling students to engage with complex issues of context, culture, and environment outside of an urban core. In the final two semesters, M.Arch students work alongside post-professional students (Ms.AAD) in a studio of their choice selected from around 18 different options.

The studio space itself is also treated as a collaborative environment where shared community values of academic excellence, integrity, mutual respect, and local/global engagement are upheld. Studio sections do not exceed twelve students per critic in order to maximize individual attention and peer collaboration. Students work both individually and within groups on design studio and technology projects and participate in comprehensive design reviews. From 2014–2016, all architecture studio spaces were renovated to emphasize openness and collaboration: every studio section is assigned one long table for individual workspaces (where each student is given a computer) and another table for collective desk-crits.

Second-year students act as student mentors and informal critics to first-year studio projects. This form of peer mentorship strengthens the collegial spirit of the school and is one of the vehicles through which assimilated experience and knowledge is communicated across generations.

**ii. Outside the Classroom**

Outside of the studio environment, students are encouraged to engage on an individual and collective level both within and outside of their required coursework. The School provides opportunities for travel and field trips as well as for participating in student organizations, workshops, and other program-specific and campus- and community-wide activities.

Since the establishment of the William Kinne Fellows Fellowship Endowment in 1952, travel has become a fundamental aspect of student life at GSAPP and one of the major ways that the school distinguishes itself from other graduate programs. Travel is planned with a gradual outward focus—from working on New York City in the Core Studios to expanding regionally in Advanced Studio IV and then opening to national and international travel in Advanced Studio V and VI. Opportunities for travel are integrated into the M.Arch curricula via studios and seminars and also through sponsored Summer Workshops—with M.Arch students travelling a minimum of two times throughout the Design Studio sequence. Beyond providing the opportunity to explore potential sites in person, studio travel opens up questions about what it means to practice and think in a global context, and invites the complexities that ensue from these explorations into the world as an integral part of the design process.

There are many student organizations that offer extracurricular opportunities for growth and learning, and many opportunities to create new ones. While new organizations form each year in response to the needs and desires of the current cohort of students, there are groups that have operated for decades and that have become long-standing traditions of the school, such as 6 on 6. GSAPP

maintains an up-to-date list of student organizations, along with their contact information, on the school's website. Student organizations can send announcements and invitations to targeted audiences, specific programs, and/or the entire school through the Academic and Student Affairs Office; the office also actively disseminates information to GSAPP students about group opportunities within the larger university. GSAPP's student groups, new and old, are a vital expression of the school, and the School works to support them in a variety of ways: with the guidance of faculty advisors, through communications, event organization, space allocation, exhibitions, and financial resources.

Detailed information about Travel and Extracurricular Opportunities can be found in Section 3 of this report: 1.2.1 Student Support Services.

A list and description of current student organizations, working groups, and student-led initiatives can be found at: <https://www.arch.columbia.edu/student-organizations>.

### **iii. Assessment of Learning Culture**

GSAPP has formalized several systems to gather student feedback on the learning culture of the school. These systems provide official channels of representation and encourage ongoing communication, and are in addition to GSAPP's welcoming of informal feedback from all students. The Academic and Student Affairs Office and the Finance Office maintain an "Open Door Policy," which encourages students to visit administrative offices during business hours without needing to make an appointment and pushes the administration to solve problems as soon as they arise. Students can always submit their concerns by writing to the Dean of Students at [feedback@arch.columbia.edu](mailto:feedback@arch.columbia.edu) and the Dean of Students will work with the appropriate administrator or faculty member to address the issue.

One structure that helps to secure this goal is Program Council, an organization composed of a group of students from each program, who have been elected by their peers and who serve as coordinators and communicators between the students, faculty, and administration. They meet with the Dean regularly during the academic year as well as with pertinent director and administrators to work out issues and represent student concerns. Conversations with the Dean span topics from the daily life and functioning of the school to broader questions of curriculum and pedagogy as well as discussions about the direction of the school and the field.

In 2020, with the impact of COVID-19 and the movement to remote operations, some of the usual modes of communication and feedback felt strained and insufficient. Responding to the need for greater connection and support, in Fall 2020, the Dean, the Dean's Office and Student Affairs intensified regular weekly meetings with students across all three M.Arch years, as well as with student groups and Program Council. The positive results of these meetings are underway, with the administration and students working together to strengthen and clarify how students can contribute to the health and life of the School.

## **B. Studio Culture Policy**

### **i. Background**

As part of the National Architecture Accreditation Board (NAAB) conditions, each accredited school of architecture is required to have a written policy addressing its studio culture. This requirement resulted in the American Institute of Architecture Students Studio Culture Task Force (2002) that called for explicit policies that support specific shared values—optimism, respect, sharing, engagement, and innovation—within the studio.

## **ii. Studio Culture Policy**

At required student orientations, the written studio culture policy is introduced to new and continuing students. The policy is evaluated, reviewed, and updated by a formalized review process with faculty, students, and staff on a yearly basis. The Studio Culture Policy emphasizes the studio environment as offering a supportive and collaborative approach towards shared design excellence, creativity and collective critical thinking, all of which are essential aspects of life at GSAPP for students, faculty and staff. The studio is also framed as a place of health and wellness and the Studio Culture Policy regularly makes available information on resources available to students at GSAPP as well as at the University.

The Studio Culture Policy can be found at: <https://www.arch.columbia.edu/architecture-studio-culture>.

### **I.1.3 Social Equity**

#### **A. Institutional Initiatives for Diversity and Inclusion**

##### **i. Columbia University**

Columbia University is dedicated to increasing diversity in its workforce, its student body, and its educational programs. In fulfilling its mission to advance diversity, the University seeks to hire, retain, and promote exceptionally talented people from different racial, cultural, economic, ability, and ethnic backgrounds. Through effective and fully compliant affirmative action and equal opportunity policies, the University strives to recruit members of groups traditionally underrepresented in American higher education and to not only increase the number of BIPOC and gender-inclusive candidates in its graduate and professional programs but also across its faculty.

The University has numerous programs dedicated to increasing and sustaining the diversity of faculty administered by the Office of the Vice Provost for Faculty Advancement. Funding opportunities from that office include support for Faculty Recruitments from Underrepresented Groups (Standard Search and Target of Opportunity Recruitments), Faculty Recruitments in the Area of Race and Racism Scholarship, Research Support to Accelerate STEM Cluster Hiring, the Initiative to Support LGBTQ Scholarship, the Grants Program for Junior and Mid-Career Faculty who Contribute to the Diversity Goals, and Addressing Racism Seed Grants. The Office of the Provost also has an Advisory Council for the Enhancement of Faculty Diversity; two of its sixteen members are from GSAPP. Other University initiatives that support a diverse pipeline include the Bridge to the PhD Program in STEM, which is designed to increase the participation of students from underrepresented groups in PhD programs in STEM fields, and the Provost Diversity Fellowship Program, which supports underrepresented Columbia PhD students.

##### **ii. GSAPP Faculty Diversity**

GSAPP is committed to diversity amongst its student body, faculty, and staff. This major commitment is a key part of long-term planning. When Dean Andraos' leadership began in the 2014-2015 academic year, there were 35 full-time faculty including 16 women and 8 from minority groups. In the 2020-21 academic year there are 36 full-time faculty members including 19 women and 10 from minority groups. In 2014-2015 there were 19 tenured faculty including 7 women and 2 minorities. In the 2020-2021 academic year there are 23 tenured faculty including 10 women and 4 minorities. The 2020-21 tenure-track cohort of 7 includes 6 women, 3 minorities, and 2 faculty of undisclosed race and ethnicity. In the 2021-22 academic

year there will be 2 additional tenure-track faculty, 1 Black and 1 Hispanic/Latino. In the 2021-22 academic year, there will be 25 faculty serving in the Master of Architecture (M.Arch) program: 3 are Black (8.3%), 3 are Hispanic/Latino (8.3%), 14 are women (50%), and 1 faculty member is of undisclosed race and ethnicity. As a point of comparison, the 2019 NAAB Annual Report on Architecture Education indicates that women make up 35% of full- and part-time faculty in accredited schools. This same report indicates that 2% of faculty (including adjuncts) reported as being Black or African American and 9% of faculty reported as Hispanic/Latino.

GSAPP completed 3 faculty searches in Architecture in academic years 2017-18 and 2018-19—1 in the area of Design, 1 in History and Theory, and the other for our Critical, Curatorial, and Conceptual Practices (CCCP) Program. These searches yielded 6 new faculty members. Of the 6 new faculty hired, 1 is a Hispanic woman, 1 is an Asian woman, 1 identifies as LGBTQ+, and 1 is Muslim.

Despite challenges due to COVID-19, the School was able to hire 2 additional new faculty members into critical positions in Architecture. In the 2020-21 academic year, GSAPP had the opportunity to fill a vacant position in Architecture Technology with a highly qualified Hispanic woman. In addition to being eminently qualified to lead the Architecture Technology sequence and teach both core and elective courses, this new assistant professor's focus on socially and environmentally sustainable building materials supports GSAPP's foci of Climate and Equity. GSAPP also made a hire through the Office of the Provost's Target of Opportunity program for an assistant professor to begin in the 2021-22 academic year. This faculty member, whose work investigates the rapidly transforming urban conditions in the Global South and questions the ways they are being represented, will increase the critical presence of Black faculty.

### **iii. GSAPP Faculty Support**

GSAPP has benefited greatly from the University programs outlined above. Numerous GSAPP faculty have received diversity grants for their research and teaching work, and we have received target-of-opportunity support for the hire of several faculty recruits as well as faculty retentions; the School has also been able to attract a more diverse PhD student cohort through the Provost Diversity Fellowship Program which promotes diversity, inclusion, and equity in pathways to the professoriate and provides an additional stipend and professional development opportunities to awardees. Our faculty participate in other University programs such as the Provost Leadership Fellows program which offers career development and skill-building opportunities for faculty as a pathway to enhancing academic governance and leadership at Columbia, and the Senior Faculty Teaching Scholars program which gives faculty the opportunity to create a vision and plan for supporting, changing and innovating the culture of teaching and learning within their own department or school and across campus.

Most recently, in Fall 2020, Junior Faculty Grants were awarded to architecture faculty members Assistant Professor Ziad Jamaledine, for his research proposal *Building the Mosque: Sub-Saharan African Models*, and Assistant Professor Lola Ben Alon, for her research proposal *The Environmental and Social Life Cycle Potential of 3D Printed Earthen Buildings*.

## **B. Plans to Maintain or Increase Diversity**

### **i. Faculty Diversity**

In parallel to University initiatives, GSAPP is committed to continuing its practice of employing heterogeneous search committees and of using each search as an opportunity to reexamine the needs of the school and its programs, as well as foster crucial diversity and inclusivity. GSAPP's adjunct faculty is

also an opportunity to diversify and broaden the perspectives and backgrounds at the school, and to continuously introduce emerging or underrepresented scholars and practitioners to the field.

In the past five years, we have actively sought BIPOC and female faculty to teach design studios, technology lectures, and other courses throughout the School. Currently, six of the eight Sequence Directors and Coordinators who work closely with the Dean to shape the M.Arch curriculum and recruit adjunct faculty are women and/or BIPOC, including the director of the Advanced Studios, the director of the Core Studios, the director of the Visual Studies Sequence, and the director of the Building Science and Technology Sequence. In the architecture programs we have strived to increase women adjuncts in technology and visual studies courses. In spring 2014, just prior to Dean Andraos's start, approximately 16% of adjunct faculty in technology and visual studies were women. In spring 2021, approximately 46% are women. In the 2020–2021 academic year, approximately 42% of the studio faculty are nonwhite (including 19% who identify as Black or African American) and 6% are of undisclosed race and ethnicity.

Under Dean Andraos's leadership, between 2014 and 2020, nonwhite adjunct faculty in architecture have increased from 23% to 36% and women adjunct faculty have increased from 25% to 36%. This is, of course, nowhere near where we need to be—as a school, a discipline, and a field—and so in addition to opening up teaching opportunities we have started a number of new initiatives as part of the School's Anti-Racism Action Plan, including a curriculum development award to encourage GSAPP faculty to embrace anti-racism in their teaching and a faculty research award to advance the transformation of the field to become more diverse, equitable, and inclusive. We are also working to strengthen existing partnerships—such as with the National Organization of Minority Architects—and to create new connections such as the development of a Community Fellows Program, which will help institutionalize the School's commitment to anti-racist pedagogy and practice and further develop relationships between GSAPP and New York–based communities of color.

## ii. Public Programming

GSAPP is committed to highlighting and amplifying BIPOC voices in the School's public programming and in classes where guest lecturers are invited. At the time of the School's 2018 Self Study, GSAPP reported that during the 2017–2018 academic year half of the lecture participants were women and 17% were BIPOC speakers, while women comprised 46% of conference participants and 22% were from minority groups. In addition to further diversifying who speaks and participates at the School, GSAPP focused on developing more programming featuring underrepresented practitioners and marginalized communities.

Reflecting the School's concerted effort to further diversity events during the 2020–2021 academic year, 80% of the Dean's Lectures have featured minority speakers, including 45% Black speakers, and more than half of the lectures feature women. Recent events that have highlighted interdisciplinary contributions by alumni and faculty include *Beverly L. Greene and Norma Merrick Sklarek: New Research in Black Women's History in Architecture*; *Addressing Systemic Racism in Real Estate*; *Building Collaboration: On The Question of Repair*; and *Planning Futures? On Decolonial, Postcolonial, and Abolitionist Planning*.

GSAPP's focus for the coming years will be continued support of senior faculty, to retain and tenure junior faculty, and retain and support mid-career faculty with the aim of maintaining the strong and diverse faculty cohort that the School has developed over the past several years. We may also have the opportunity, through retirements and additional hires, to increase the diversity of our faculty. We view each faculty search as an opportunity to examine how the new challenges, changes, and trajectories in our disciplines are reflected at GSAPP, evaluate the needs of the School and the program into which we are hiring, and find superlative candidates from diverse backgrounds that can enrich the School with new

perspectives and ideas. We will continue our efforts to increase the diversity of our student population and actively engage collaborators who innovate and expand the GSAPP community.

More information on GSAPP's focus on Equity can be found at: <https://www.arch.columbia.edu/equity>.

### **iii. Strategic Plan for Enrollment**

GSAPP is committed to increased diversity and inclusion among its student body, and is implementing changes in its Admissions and Financial Aid that were identified and communicated as part of the School's Anti-Racism Action Plan. These include recruiting underrepresented student populations through targeted outreach to institutions that award the largest number of bachelor's degrees in architecture and allied fields to those students, with a focus on Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs). This outreach is supported by faculty and their external teaching and lecture opportunities that further attract BIPOC students to the School. Implicit Bias training for all application readers has been established as a regular practice to support greater equity in the admissions review and selection process.

Efforts to increase diversity have yielded positive results, with 48% BIPOC students among enrolled M.Arch domestic students in 2020, compared to 32% in 2017 (defined as the percentage of US citizens and permanent residents whose ethnicity is not "unknown" or "white"). In the current admissions cycle, M.Arch applications from underrepresented students have continued to increase, most notably with a 78% increase among Black or African American applicants and an 80% increase among Hispanic applicants over the prior year.

GSAPP offers financial aid to support the most highly qualified applicants, and has established scholarships to actively promote diversity, inclusion, and equity by breaking down barriers of access to graduate study. To this end, GSAPP committed \$1 million to create the new Norma Merrick Sklarek Scholars Fund in 2020 to support the recruitment of historically underrepresented groups at GSAPP through full-tuition scholarships. Additional scholarships for historically underrepresented students within the School include the Milton & Yvonne Edelin Scholarship Fund, endowed by Milton Edelin '57 M.Arch with the largest gift from a Black alumna in the School's history, and the George and Nancy Rupp Fellowship Fund, named in honor of the Columbia University President recognized for his commitment to forging stronger relationships with local New York neighborhoods.

### **iv. Administrative Staff**

GSAPP is committed to diversity in all aspects of the School. Along with the cultivation of a diverse faculty, leadership at GSAPP also contributes to the inclusive climate—ten of the School's fifteen programs or sequences are directed or co-directed by women and/or minorities, five of the six deans at the School are women, and one of the five women deans is Hispanic.

### **v. University-Wide Policies and Procedures**

Columbia University at large has established policies and procedures related to harassment and discrimination. There are multiple channels available for students to resolve issues of harassment and/or discrimination. These include University OMBUDS Office, which offers confidential, impartial, and independent advice and mediation. Another option for students is the Dean's Discipline within the Dean of Students Office. Many grievances are resolved through these two channels. Occasionally an issue is brought before the Office of Students for Gender-Based and Sexual Misconduct or the Office of Equal

Opportunity and Affirmative Action (EOAA). The EOAA office is responsible for managing Columbia University's Student Policies and Procedures on Discrimination and Harassment and for coordinating compliance activities under these policies and the applicable federal, state, and local laws. It has been designated as the University's Compliance Office for Title IX, Section 503 of the Rehabilitation Act, and other equal opportunity, non-discrimination and affirmative action laws. Students, faculty, and staff may contact the EOAA Office to inquire about their rights under University policies, request assistance, seek information about filing a complaint, or report conduct or behavior that may violate these policies.

More information from the Columbia University's Office of Equal Opportunity and Affirmative Action can be found at: <http://eoaa.columbia.edu>

### **C. Process for Development of Diversity Plans**

GSAPP is committed to promoting a climate of inclusiveness, not only of race and ethnicity, but also of gender and gender identity, sexual orientation, and background. The breadth of perspectives and diversity of faculty is deeply embedded within the School's core values and its practices.

The Office of the Vice Provost for Faculty Advancement works in collaboration with the School to promote a climate of inclusiveness through their various programs and initiatives. In addition to an annual review of GSAPP's long-term diversity plan, the School periodically works with the University on focused priorities, for example providing target of opportunity grants, retention support, and research funding for junior faculty.

More information on Faculty Diversity and Inclusion at the Office of the Vice Provost for Faculty Advancement can be found at: <https://provost.columbia.edu/content/office-vice-provost-faculty-advancement>.

### **D. Long-Range Planning**

Currently, GSAPP is actively engaged in addressing systemic racism and anti-Black racism across all its dimensions and has a central goal of placing social equity as a component central to its pedagogical agenda. The School is dedicated as a community to engaging in active anti-racist practices that will enable new foundations from which to think through, engage with, and imagine the future of the built environment. GSAPP is committed to becoming an actively anti-racist institution.

GSAPP has formed a comprehensive Anti-Racism Action Plan that is the synthesis of those efforts and recommendations. The plan outlines specific steps to address the priorities voiced by the GSAPP community. These action items were developed throughout the Fall 2020 semester and reflect the recommendations articulated by the Dean's Response Framework, the faculty-led Anti-Racism Task Force, and the findings of Diversity Dimensions Consulting. The Action Plan describes the process by which these plans are developed, and the individuals involved in the process. The Action Plan also describes how these initiatives are linked to the program's self-assessment or long-range planning.

GSAPP's ongoing Anti-Racism Action Plan can be found at: <https://www.arch.columbia.edu/anti-racism-action-plan>.

## **I.1.4 Defining Perspectives**

### **A. Collaboration and Leadership**

Collaboration and leadership opportunities are at the heart of the M.Arch program at GSAPP. Collaboration is central to the ethos of the school, and to the curricular and spatial pedagogy of the design studios. Teamwork is encouraged at various scales throughout the Core Studios sequence: collaborative work and teams are often later sought out by the students themselves. Spatially, the design studios foster openness and collaboration through their two-table layouts.

The collaborative studio spaces are also designed to foster peer-to-peer learning, which offers an opportunity for the development of leadership skills. These skills are central to GSAPP's extensive opportunities for students to become Teaching Assistants and mentors to younger classes.

Reviews provide an opportunity to engage with professionals from across our fields and around the world and gives students the chance to experience mock client or community meetings. The M.Arch's "roving engineers" initiative is also an opportunity for students to work directly with experts on developing their projects.

GSAPP also emphasizes cross-programming, joint studios and courses, all-school interdisciplinary courses, and the opportunity for multifaceted reflections on the built environment through events, lectures, colloquia, publications, gallery exhibits, and more.

Finally, cross-cultural awareness and empathy—necessary in creating good colleagues and leaders—are central to the program. Students are invited to engage with a wide range of perspectives, backgrounds, and contexts throughout their time at GSAPP. The Common Circle orientation course is, in particular, a result of the School's commitment to deepening cultural awareness and empathy amongst its students and faculty, and to becoming an anti-racist institution.

### **B. Design**

The program gathers a highly experienced and diverse faculty—leading practitioners, scholars, and researchers in the field—with an inquisitive and international student body. As students learn to draw, make, write, and build, they learn to re-invent ideas, aesthetics, forms, type, materiality, experience, program, density, systems: all terms that continue to embody architecture as a discipline and practice.

At the heart of the M.Arch experience is an ongoing feedback loop between the space of the design studio and the space of the classroom. Design is thought of as the continuous integration of what is taught in the classroom and what is explored and integrated in the design studio. Learning to analyze a project through design as an iterative process becomes crucial as students are invited to bring into the studio all that they are learning. The Core Studios sequence begins with the question of architecture as boundary and gradually increases in scale and complexity, up through Columbia GSAPP's seminal Housing Studio, which anchors architecture in its relation to the city. The Advanced Studios sequence begins with the innovative Scales of Environment Studio—which builds on environmental invention as a generator of design across material, building, and urban scales and systems—and ends with highly diverse and complex projects in which students claim a position vis-à-vis the field, and outline their interests for future engagement.

Learning to think through design is not limited to the studio, but rather becomes a critical lens through which to understand and recast knowledge: whether in the History and Theory Sequence, which is designed to broaden students' perspectives through its commitment to an expanded, inclusive, and global view toward architecture's past; the Visual Studies Sequence, which focuses on design as the act of drawing and making; the Building Science and Technology Sequence, which prepares students to

understand the environmental, structural, and material opportunities for design as well as their consequences for design decisions; the Methods and Practice Sequence, which prepares students to engage as professionals within the field; and the Elective and Optional Sequence, which invites students to pursue design through their individual interests in architectural, urban, and environmental topics.

Across the curriculum, design is understood as a mode of incisive critical thinking and knowledge that is brought together with technical expertise, creative skill, professional ethos, and cutting-edge drawing and making.

### **C. Professional Opportunity**

Professional opportunities are offered pedagogically through classes focused on professional practice, informally through daily interaction between faculty and students, and formally through initiatives such as Career Services, the Mentorship Program, or the Alumni Board's initiatives. Since almost all American states require completion of the Architectural Experience Program (AXP) before licensure exams, GSAPP offers several lectures combined with courses in the Methods and Practice Sequence to help students understand how they may register as early as possible, and track hours and tasks to gain credit for the AXP from the National Council of Architectural Registration Boards (NCARB) during internship years. Adjacent to the lectures central to these courses, GSAPP also hosts regular events—lectures, discussions, and symposia—on how a new generation of architects and designers approach practice in different ways around the world.

Offering greater professional opportunities and development is the focus of GSAPP's Career Services office, which was established in 2015. Through career fairs, networking events, cover letter and resume review, counseling sessions, and connections to alumni as well as relevant job opportunities, Career Services has multiplied professional pathways available to students. In 2020, the Career Services team began collaborating more strategically with the Alumni Relations office and created an Alumni Conversation series, inviting alumni to share a professional project. In 2021, and in response to student requests, the series is featuring alumni whose work is primarily connected to issues of equity, climate, and social justice.

Now in its seventh year, the Student-Alumni Mentorship Program connects students with alumni based on mutual interests, geographic preferences, and professional backgrounds—in turn reconnecting GSAPP alumni with the school. Initiated by the GSAPP Alumni Board, the School now matches approximately 200 current students annually to alumni mentors based in NYC and around the world.

Formed in July 2010, the GSAPP Alumni Board represents alumni from all GSAPP degree programs: Architecture, Real Estate Development, Urban Planning, Urban Design, Historic Preservation, and Critical, Curatorial, and Conceptual Practices. Today, the Board is comprised of sixteen members and has a mission to foster engagement by encouraging lifelong opportunities for connections between alumni and students across programs, generations, geography, and demographics; to unify the GSAPP community through welcoming, inclusive, and innovative programming; to promote excellence and dialogue focused on the evolving global design field; and to cement GSAPP's role in the field as a leader.

In 2020, the Board revised its working Committees in order to better engage alumni in the full lifecycle of an individual's experience at GSAPP; to make the alumni community visible and accessible to the student community; and, importantly, to support the School's commitment to equity and inclusion. Key initiatives of the Board include the sponsorship of the Alumni Conversation series, the Alumni-Student Mentorship Program, bi-weekly informational mentorship sessions called Tuesday Talks, and GSAPP Office Hours, which invites alumni to virtually share their work and provides the initial framework for an alumni-to-alumni mentorship program.

More information about professional opportunities can be found at: <https://www.arch.columbia.edu/career-services>.

#### **D. Stewardship of the Environment**

A focus on environmental stewardship cuts across all of the dimensions of the School, from addressing climate change and its impact on the built environment throughout our curriculum as well as through events, exhibitions, and publications. Through the M.Arch Design Studio Sequence, through interdisciplinary and/or all-school courses dedicated to addressing climate change and its impact on the built environment as well as on society, and through courses dedicated to new forms of advocacy and learning opportunities offered within and outside of the curriculum, GSAPP is dedicated to teaching resiliency, sustainability, and adaptation.

Within the M.Arch curriculum, environmental concerns have become central to the Building Science and Technology Sequence in particular. Since the last accreditation, this sequence has shifted: students are now introduced to the question of the “environment” in their very first semester, before being introduced to structures in their second. Architectural Technology I (ATI) has been designed as an all-encompassing introductory course that situates environmental concerns at the heart of building design.

The Building Science and Technology Sequence is dedicated to scientific knowledge on building materials, envelope systems, computational technologies, and digital fabrication in search of complex designs that promote healthy, resilient, adaptive, and affordable and accessible living environments.

Beyond this sequence, students are also invited to participate in extracurricular activities that foster advocacy towards a more sustainable and equitable built environment by joining student organizations such as GreenSAPP. Students can also partake in the Making Studio, which has developed extensive guidelines on best practices for recycling materials and the use of low embodied energy materials, or enlist in one of the many courses focused on architectural practice that are deeply committed to addressing climate change and advancing new modes of engagement and action in support of sustainable practices.

More information on GSAPP’s focus on Climate can be found at: <https://www.arch.columbia.edu/climate>.

#### **E. Community and Social Responsibility**

Community and social responsibility is at the heart of GSAPP’s commitment to empowering the next generation of architects and practitioners. Through numerous events, conferences, exhibitions, and publications, as well as extensive initiatives led by faculty centers, labs, and projects—such as the Center for Spatial Research, the Post Conflict Cities Lab, the Urban Community and Health Equity Lab, or the initiative Who Builds Your Architecture?—students learn to think through modes of practice and scholarship and how to advance equity in the built environment.

While community and social responsibility is a strong focus across the M.Arch curriculum, it is at the heart of the Core III Housing Studio pedagogy in which students are invited to think relationally about modes of living across various contexts, cultures, income differences as well as ethnic and racial disparities. Whether exploring how social housing in Mexico City differs from public housing in Chicago or affordable housing in New York, or whether engaging in difficult discussions about the design and planning of housing’s long legacy of segregation in the US, students are exposed to the complexity of community participation and engagement. Every semester, a different community and/or public entity is

invited to partake in the studio through discussions, reviews, and more. In Fall 2020, for example, the Housing Studio engaged with HPD as well as with the Melrose community in the South Bronx.

These curricular engagements often lead to extra-curricular opportunities. In Fall 2020 students self-organized to informally provide gardening services on the weekend to the community garden across from their design studio site; in Summer 2021 a student workshop was initiated by Professor Hilary Sample in collaboration with HPD. The student-led Housing Lab is developing increasing opportunities for engagement with the University's immediate community in Harlem and beyond, such as fostering partnerships with the West Harlem Development Corporation and the School.

The School supports student organizations such as the LatinGSAPP whose recent events included "Agency in Architecture," which explored political agencies and authorship in architecture and its spatial implications. The event was a cross-school collaboration between LatinGSAPP and Yale School of Architecture's NOMAS as part of the "Latinx Features: Spring 2021 Roundtable Series" organized by YaleNOMAS.

Finally, increased awareness across the School on issues of racism and anti-Black racism in the built environment have permeated across all of GSAPP's dimensions, with a number of initiatives and actions underway with GSAPP's Anti-Racism Action Plan.

More information on GSAPP's focus on Equity can be found at: <https://www.arch.columbia.edu/equity>.

GSAPP's ongoing Anti-Racism Action Plan can be found at: <https://www.arch.columbia.edu/anti-racism-action-plan>.

### **I.1.5 Long-Range Planning**

#### **A. Key Priorities**

The main long-term goals for the School since the last accreditation have been to diversify and broaden its full-time and adjunct faculty and staff; to increase the support of its student body; to expand its areas of expertise to include a stronger focus on climate change, social and racial equity in the built environment, building science and making, as well as advanced computation and visualization; to create a rich set of opportunities for joint studios and shared classes between programs; to develop a vibrant applied research culture and expand interactions between research and pedagogy; and to engage with the alumni network towards greater connections with the profession. The School remains deeply and actively dedicated to meeting these goals.

More information on GSAPP's key pedagogical priorities—Climate, Equity, and Data and Design—can be found at: <https://www.arch.columbia.edu>.

##### **i. Faculty: Diversity and Breadth**

GSAPP is committed to diversifying perspectives and backgrounds at the school, and to continuously introducing emerging or underrepresented scholars and practitioners to the field, as described previously in section I.1.3 Social Equity. This pledge includes inviting a range of practitioners and educators from around the world to GSAPP and diversifying who speaks as a part of the school's lecture series as well as who participates as a guest critic in studio reviews. Faculty have also increasingly come together to pursue collective areas of inquiry and focus, such as "UNLEARNING WHITENESS" and other exclusionary practices and modes of being and thinking. This commitment to "unlearn" was recently

explored across all the Advanced VI Studios (Spring 2021).

## **ii. Students: Increased Support**

In 2017, GSAPP launched the most ambitious Fundraising Campaign in its history with a goal of \$35 million. The campaign encourages major donors to support the School's areas of core excellence while developing the supportive strategies needed to amplify the School's unique ecology.

Fundamental to GSAPP's efforts has been a commitment to raising funds for financial aid. Since the start of the Campaign, the school has raised \$4.8 million for this effort. Moreover, beginning in 2019, all new gifts made in support of endowed Financial Aid have been matched—dollar for dollar—by GSAPP. The challenge will match up to \$2,000,000 for gifts made in support of endowed Financial Aid through December 31, 2021.

Long-range planning will focus on increased support and opportunities for student organizations, encouraging students to participate in extra-curricular activities, organize their own events, and connect with other student organizations across campus and at other schools and universities. In the 2020–2021 academic year, the Dean together with the senior administrative staff worked closely with students, student groups, and Program Council to formalize the student groups handbook. A working group to consider Program Council's role and responsibilities, and expanding its representation, areas of focus, and modes of communication and interaction with administrative and faculty leadership, will be formed in the coming year.

More information on student financial aid can be found at:

<https://www.arch.columbia.edu/campaign/financial-aid>.

## **iii. Pedagogy: Expand Areas of Expertise and Interdisciplinarity**

In the past years, much curricular work has been done to strengthen the identity of the curricular sequences around the Design Studio Sequence, and to better define their trajectory as equally important in the education of the next generation of architects.

Moving forward, we will continue to further amplify changes such as those made to the Architectural History and Theory Sequence, which was broadened to increase the study of underrepresented voices and traditions. The Visual Studies Sequence focused on amplifying critical and creative approaches to digital literacy in order to move towards increased equity, sustainability, and creativity. The Building Science and Technology Sequence intensified its focus on environmental systems and sustainable building techniques, as well as the exploration of embodied energy and alternative materials for design and construction. And, just as importantly, the program will continue to seek increased integration between its curricular and Design Studio Sequences where students can learn to test, explore, and apply many of the ideas and skills developed in the studios' adjacent sequences.

One particular area of focus for the program will be the Professional Practice Sequence: expanding its offerings to include a broader range of activist approaches, which are more reflective of the diverse modes of practice found in architecture and its adjacent professions.

GSAPP will continue to build on the School-wide efforts to increase opportunities for cross-program learning and interaction through all-school courses, joint studios, and expanded support for dual degree students. This emphasis was amplified as part of GSAPP's Anti-Racism Action Plan, which conceived of key actions including a Common Circle orientation course, which will be required for all students in their first semester at GSAPP and will address issues of anti-racism across cultures, as well as a new Community Fellowship program, which will help institutionalize the School's commitment to anti-

racist pedagogy and practice and further develop relationships between GSAPP and New York-based communities of color.

#### **iv. Research Culture**

GSAPP is committed to developing research opportunities at the School through existing centers, labs, and initiatives as well as through the launch of new ones. Amongst possible long-range support is increased funding and opportunity for the Housing Lab. Launched in 2019, the Housing Lab has developed into a student-run research center, which is served by a rotating list of faculty advisors and in turn serves to increase connection with the University's surrounding community. Bringing together student-researchers from across the School's programs, the Housing Lab has contributed significantly to the M.Arch Core III Housing Studio curriculum, advancing an anti-racist agenda for the studio by offering critical and historical knowledge while also inviting new forms of practice.

Another future area of research that several faculty have been building is that of embodied energy and material research. At the intersection of applied research that has been developed by Associate Professor David Benjamin through the school's Embodied Energy Initiative, Professor Jorge Otero-Pailos through the Historic Preservation Technology Lab, and Assistant Professor Lola Ben Alon through the recently founded Healthy Materials Lab is a unique opportunity to strengthen research on materials and construction at the school.

#### **v. Professional Connections**

GSAPP is pursuing ways of providing more educational opportunities and continued engagement for graduates and professionals interested in the built environment.

Based on the results of an alumni survey in January 2018, alumni responded with an overwhelming interest in "continuing education" opportunities. To support this effort, the GSAPP Alumni Board has created a Professional Development Committee, which will offer two workshops for alumni in Summer 2021: one led by professional executive coach Patricia Hayling Price, and an Alumni panel to share best practices for pivoting during the post-pandemic period. The Committee also plans to launch a series of workshops oriented towards small and single practitioner firms. Workshops are anticipated to cover topics such as anti-bias training in management and hiring, as well as how to leverage technology and social media for business development and financial planning.

Another form of continuing education and support for recent alumni is through the GSAPP Incubator Prize, founded to support recent graduates in exploring new ideas and projects at the intersection of culture, technology, and the city. In 2019, the GSAPP Incubator transitioned from its tenancy at NEW INC to a generous award of \$10,000. Over sixty alumni-led projects have participated in the Incubator since its inception. In 2020, GSAPP announced a commitment of \$250,000 to support the Incubator Prize program for 2020 and 2021, enabling the School to double the number of prizes awarded annually. In 2020, over one hundred alumni applied, and sixteen prizes were awarded. Long-term planning includes increased support and capacity for the prize to have impact.

#### **iv. Space**

Moving forward, continued upgrades to GSAPP's facilities will require a more formalized masterplan to attract significant external support from donors. Building on the extensive renovations that were performed from 2014 to 2018, GSAPP identified key priorities for donor support that include the school's

two main auditorium spaces: Wood Auditorium (capacity 265) and Avery Room 114 (capacity 90). Situated on the 100 level of Avery Hall, these spaces host over fifty public events annually, including lectures, school-wide events and programming such as Open House and Orientation. Wood Auditorium and Avery 114 are where first impressions and experiences are formed for prospective and enrolled students at GSAPP. In addition, the GSAPP Cafe, also located in the 100 level of Avery, is one of the School's most prominent social spaces, and needs to be redesigned to be more representative of a school of architecture and the built environment.

## **B. Planning and Review Processes**

Key issues are raised by the Dean, by members of the Executive Committee (the tenured faculty), by the Architecture Sequence Directors, the wider full-time and adjunct faculty, students, graduates, or the University. Discussion of the issue within the Executive Committee and/or the full-time faculty clarifies the long-term question and its importance and leads to the establishment of a faculty task force that studies, in consultation with staff and students, a particular area of the curriculum, school life, or infrastructure, for example. Their conclusions usually result in a revision of the curriculum, policies, or priorities, and often to the launch of a targeted faculty search, series of initiatives or other actions to support advances in that area.

Search committees are treated as a key part of long-term planning, with extensive discussion of how an appointment can reinforce key priorities and what adjustments are needed to the rest of the program—and the progress of each tenure-track faculty member is monitored in terms of these priorities at each review. Individual faculty progress reviews become a major forum for analyzing the school's path, strengths, weaknesses, and opportunities. Likewise, comprehensive design reviews of student portfolios by faculty guide discussions about the success in meeting shared goals and future directions, often stimulating the formation of a task force.

Over the last year and continuing now, the same process has been working at a larger scale with the entire full-time architecture faculty acting as a curriculum review committee, holding an extended series of meetings to concentrate on the integration of all areas of the curriculum (Design, History and Theory, Building Science and Technology, Visual Studies, and Professional Practice).

Students are an integral part of the School's continuous mechanism for review and long-term planning. Through regular meetings with the student Program Council, feedback and input is shared from the student body to the Dean and the Dean of Students. This input includes everything from improvements and plans that can help support day-to-day operations, to support for student events and student groups, concerns or demands for curricular changes, and considerations or ideas for expanding connections between the School and its professional networks.

GSAPP also carries out long-term planning in collaboration with the University, with annual reviews of the School's long-term objectives with the Provost, and periodically works with the University on focused priorities. While this continuous long-range planning effort, and all the associated feedback loops, is not explicitly framed in terms of the five curricular perspectives, those perspectives resonate strongly with GSAPP's core mission.

To monitor success in achieving these long-term priorities, the School closely observes a wide range of key information points. These include: the quantity and quality of applicants at admissions; the quality of faculty applicants; the student electronic evaluation of courses; regular feedback from the student program council; studio lottery and course enrollment statistics; faculty review of students (individual studios and comprehensive reviews of portfolios); commentary from visiting jurors; feedback from the provost and academic leaders of the University; feedback by graduates and by employers; the

quality and quantity of faculty publications; reviews of school publications and exhibitions; faculty, student and graduate success in competitions, exhibitions, fellowships, commissions, etc.

### **I.1.6 Assessment**

#### **A. Program Self-Assessment**

Self-assessment is an active process involving all members of the School community. Formal self-analysis of all the programs in the School is periodically carried out at the University's request. The last such formal internal review was completed in October 2018. This document, assembled thanks to the collaborative efforts of the Dean, administrative deans, and faculty, offered a current snapshot of the school. Organized according to GSAPP's main activities—Academic Programs (Section 01), Faculty Affairs (Section 02), Students and Student Services (Section 03), Research (Section 04), Programming and Outreach (Section 05), Administration and Facilities (Section 06), and Alumni and Development (Section 07)—the study captured the various preoccupations, approaches, and ambitions of the school. Sections 01–03 encapsulated the diverse positions and opportunities cultivated at GSAPP. Section 04 registered the school's various lines of inquiry and experimentation, which contribute to Columbia University's status as a leading research university. Section 05 made visible the School's effort to connect ideas and publics, and its activity as a cultural hub in New York and around the world. Sections 06–07 represented GSAPP's efforts to build strong and resilient foundations for future engagement in the school and beyond. This report addressed many of the deficiencies and causes of concern identified in the last accreditation visit. A copy of the GSAPP Self-Study Report (October 2018) is provided in Section 4 (Supplemental Material) of this report.

Individual aspects of the programs are periodically given formal self-study. For example, GSAPP's Anti-Racism Action Plan was developed throughout the Fall 2020 semester and reflects the recommendations articulated by the Dean's Response Framework, the faculty-led Anti-Racism Task Force, and the findings of Diversity Dimensions Consulting.

Day-to-day self-assessment is a shared responsibility of the Dean and the various Program Directors and Directors of key curricular areas. The Architecture Sequence Directors (Core Studios, Advanced Studios, Building Science and Technology, Visual Studies, and History and Theory) work collaboratively with the Dean/M.Arch Program Director to regularly assess the curriculum. All are in regular contact with both students and teaching faculty and are therefore ideally positioned to evaluate and communicate strengths, weaknesses, and criticisms from within and without. The Dean and Program Director together with the Architecture Sequence Directors are responsible for responding to comments and criticism regarding the M.Arch program's structure, course content, organization, and pedagogical effectiveness. Sequence Directors meet regularly with one another, with the Dean, with the faculty sequence coordinators for individual curricular sections, and with the elected student representatives of the Program Council.

Course evaluations are completed by students each semester. The results of these evaluations are analyzed by the Academic and Student Affairs Office, alongside the Associate Dean for Academic Affairs, the appropriate Program and/or Sequence Director, course instructor, and the Dean. If any recommendations are identified, the Dean, the Associate Dean for Academic Affairs, and/or the Sequence Director meet. Evaluations are anonymous and solicited electronically from all students in all classes each semester. These teaching evaluations are made available to individual faculty members as a way of improving upon course content and teaching methods. The Sequence Directors offer constant feedback to the administration and vice versa. Student evaluations, whether informal or through Program Council or formal evaluation reports, play a major role in guiding the operations of the Program,

particularly in regard to studio classes. Results of these curricular assessments are used to advise and encourage changes and adjustments to promote student success.

**B. Curriculum Assessment and Development**

Given that the core mission of GSAPP is to engage the crucial issues of our time across all the scales of the built environment, curricular review is necessarily a continuous multi-dimensional process. It is also an integral part of long-term planning. One of the key mechanisms of review are faculty task forces that are set up by the Dean in dialogue with recommendations from the Executive Committee to review particular areas of the curriculum, or the program as a whole, make recommendations and monitor the success of any changes made. The leaders of these task forces are typically those in charge of that section of the curriculum: Director of Advanced Studios, Director of Core Studios, Director of Visual Studies etc., but the team can include teachers from other areas of the curriculum, tenured and untenured faculty, and members of the administration with responsibilities in that area. These groups carry out in-depth analysis, consulting with all relevant faculty, staff, and student representatives.

Parties in the Curricular Assessment Task Force include Amale Andraos, Dean and Program Director of the M.Arch program; Danielle Smoller, Associate Dean, Academic and Student Affairs; David Benjamin and Mario Gooden, Directors of the Advanced Studio Sequence; Hilary Sample, Director of the Core Sequence; Laura Kurgan, Director of the Visual Studies Sequence; Lola Ben Alon, Director of the Building Science and Technology Sequence; and Reinhold Martin, Director of the History and Theory Sequence.

**Table 1. Parties in the Curricular Assessment Task-Force**

		<b>Role and Responsibilities</b>
<b>Dean</b>	Amale Andraos	Dean, Program Director (M.Arch)
<b>Associate Dean</b>	Danielle Smoller	Assoc. Dean, Academic and Student Affairs
<b>Directors, Advanced Studios</b>	David Benjamin / Mario Gooden	Directors, Advanced Studios Sequence (M.Arch)
<b>Director, Core Studios</b>	Hilary Sample	Director, Core Studios Sequence (M.Arch)
<b>Director, Visual Studies</b>	Laura Kurgan	Director, Visual Studies Sequence (M.Arch)
<b>Director, Building Science and Technology</b>	Lola Ben Alon	Director, Building Science and Technology Sequence (M.Arch)
<b>Director, History and Theory</b>	Reinhold Martin	Director, History and Theory Sequence (M.Arch)

Proposals for change can include the revision or elimination of existing classes, new classes, sequences of classes, type of classes, types of teachers, and type of assignments. Recommendations for new faculty hires often accompany such proposals and new faculty hires often spur curricular review in order to maximize strength and quality in that area. Search committees are traditional sites for in-depth review of curricular strengths and adjustments in long-term planning. The leaders of the committees are asked to report the concluding results of their thinking to the Executive Committee when the resulting appointments are made. This explanation then acts as the guidelines for the sequences of reviews of the incoming faculty member's contribution to the curriculum. Search committees also typically identify areas in which future appointments might be made, spurring the process to start again.

Continuous close review of studio lottery results, class sizes, student reviews of faculty, faculty reviews of students, comprehensive reviews of student portfolios, reviews of tenure-track faculty, and more are used to make ongoing adjustments to the curriculum. Directors of specific parts of the curriculum work closely with the coordinators of subsections of the curriculum to design, monitor, and refine the classes. The Director of the Core Studios, for example, works closely with the Coordinators of Studio I, II and III each year to develop the studio brief, site, exercises, and submission requirements for the coming year and works with the Dean on the selection of faculty, and advising of faculty where necessary, based on the analysis of the previous year's work in that curricular area. The final portfolio review where the collected faculty analyze the sequence of all design projects done at the school by each student before approving graduation offers a clear view of the program's integrated impact and acts as an important guide to curricular refinement.

**Section 2: Progress Since the Previous Visit**

## A. Program Response to Conditions Not Met

### II.1.1 A.4 Technical Documentation

**Visiting Team Report [2013]:** “As in the 2007 Visiting Team Report, this team did not find evidence of writing of outline specifications in any student work or assignment. The topic of specifications is discussed in a lecture in A4560 Professional Practice but the team found no evidence to demonstrate the required level of ability.

The team found evidence of wall section models prepared by students in A4111 Architectural Technology I. The rudimentary level of craft in these models was not consistent with the exceptional clarity and sophistication of computer-enabled graphics throughout the program, including details, technical diagrams, and other architectural drawings.”

**Program Activities in Response [2013–2020]:** Development of outline specifications are now reviewed with students and required as part of the final deliverables in **A4115 ATV Urban Systems Integration**. Previous wall section exercises for **A4111 AT I Environments in Architecture** have been eliminated and replaced with development of wall sections as part of the course curriculum of **A4113 ATIII Envelopes**. Within the Design Studio Sequence, **A4001 Core Studio I** requires the construction of a 1:1 mockup demonstrating material tectonics and **A4003 Core Studio III** requires a detail ½” scale sectional model or drawing. Wall type development with respect to fire protection and egress requirements is now introduced in lecture format in **A4114 ATIV Building Systems Integration** and is part of the development of the comprehensive semester-long project. Coordination between technology course curriculum and **A4560Y Professional Practice** is ongoing to ensure specification content is covered appropriately.

### II.1.1 B.7 Financial Considerations

**Visiting Team Report [2013]:** “No evidence was found in any student course work.”

**Program Activities in Response [2013–2020]:** **A4113 ATIII Envelopes** and **A4114 ATIV Building Systems Integration** have incorporated budgeting templates as assignments and deliverables for comprehensive project work. Discussions on budget and influence of decisions in system selection has also been introduced at the critic level in both classes. As part of the development of integrated design projects, students do cost take-off measurements and quantity counts, develop rough cost estimates based on historic and localized sets for comparing regional cost implications, and produce a report outlining the economic viability and the Hard Cost of Construction (HCC) of their final design project. This report is submitted alongside the final construction document set. Coordination is ongoing between Building Science and Technology curriculum and **A4560Y Professional Practice** to ensure financial consideration content is covered appropriately. The implications of affordability is also studied in the **A4003 Core Studio III** focusing on housing. The studio looks at both the social and economic issues surrounding different methods of financing housing within New York City and their implications for the provision of quality social, affordable housing.

### II.1.1 B.11 Building Service Systems Integration

**Visiting Team Report [2013]:** “The team did not find any evidence of student work demonstrating understanding of fire protection, plumbing, electrical, and security systems. Although coursework

integrating mechanical systems is extremely comprehensive, there is no evidence except for a single lecture in the A4112 course with no associated exam questions or assignments of these systems.”

**Program Activities in Response [2013–2020]: A4111 AT I Environments in Architecture** curriculum covers lighting and electrical systems in two lectures and plumbing and fire protection systems in one lecture respectively. Systems are studied by analyzing relevant building precedents and by learning how to measure and simulate air, sound, light, and thermal comfort within a building. Content is being introduced in assignments and in the final presentation requirements for the course. **A4114 ATIV Building Systems Integration** has introduced specific lectures on plumbing and fire protection system integration. Plumbing, Fire Protection, and Electrical/Security system schematics have been incorporated into the construction set deliverables (M000 drawing series and A500 Egress Plan) for the **A4114 ATIV Building Systems Integration**. Building Service Systems have also been introduced into the Design Studio sequence. In **A4002 Core Studio II**, through the building design process, students engage with these principles by developing strategies for cooling, heating, and consider egress strategies for a building with a learning program (a school). Students are asked to incorporate strategies of passive systems within their design and to produce a large-scale isometric cut-away section that details the relationship between the inside and the outside of the building. Students are also introduced to life-safety systems and means of egress for institutional buildings in a lecture given by a civil engineer and are asked to complete an egress diagram exercise that demonstrates their knowledge and competency.

## **B. Program Response to Causes of Concern**

### **Part 2, I.1.2 Learning Culture and Social Equity**

**Visiting Team Report [2013]:** “In practice, the GSAPP has a very productive, advanced, collaborative and continuous educational environment. There is evidence that faculty, students, administration and staff encourage values of optimism, respect, sharing, engagement, and innovation within the college. The team verified that there is a Studio Culture Policy Document and it is included in materials given to each matriculating student but it does not address health-related issues, such as time management. The team understands that this was developed with participation of student representatives and faculty, and formally approved by the full faculty in January of 2009.

However, discussions with the current students revealed no awareness of the existence or purpose of the document. There was no evidence of plans for ongoing student participation in the review, evolution and assessment of this document or the underlying policies. For this reason alone, the team finds this a cause of concern. However, the office of the dean of students does provide ongoing personal support and accommodates student input and acts as the defacto Studio Culture Policy Document.”

**Program Activities in Response [2013–2020]:** GSAPP is committed to providing a healthy learning environment for its students. In consultation with student representatives and faculty, the Studio Culture Policy document now includes a statement regarding health and time management. The document is available in Section 4 of this report: Supplemental Material.

**C. Summary of Responses to Changes in the NAAB Conditions**

The 2014 Conditions of Accreditation introduced Realm C within the Student Performance Criteria (SPC) with a separate focus on design integration. This change was reflected within the overall curricular approach and relationship between the Design Studio Sequence with Building Science and Technology, History and Theory, Visual Studies and Methods and Practice courses. The underlying pedagogy of the School progressively reinforces methods and skills to do research, to critically evaluate information, and to propose integrated solutions. As design projects increase in complexity, students gain the ability to synthesize a wide range of variables into their design proposals.

In addition, the inclusion of Social Equity in the 2014 Conditions of Accreditation as its own section of the APR (Section 1 I.1.3) emphasizes the necessity of equity as a separate element of the program's identity. This change in the Conditions resulted in a refocusing on equity as central to the ethos and pedagogical agenda of the School.

**Section 3: Compliance with the Conditions for Accreditation**

## **I.2.1 Human Resources and Human Resource Development**

### **A. Faculty Overview**

GSAPP's faculty, whose focus ranges from pure scholarship to pure practice, actively contributes to Columbia University's standing as a leading research university. In fact, GSAPP's faculty may be the School's greatest strength; scholars producing new knowledge advance the limits of their discipline and practitioners upend current forms of practice. The faculty's contribution to shaping the field centers on expanding practice, moving it beyond the professional to impact the disciplinary. In architecture, for example, the school's understanding of "practice as research" builds on the notion that the discipline's history is as much shaped by canonical texts, paradigmatic drawings, and speculative projects as it is by significant buildings.

Moving beyond the differences between scholarship and practice, and the various contributions in between, faculty at GSAPP are deeply committed to engaging with the world and with the crucial issues facing architecture and the built environment, such as climate change, the pursuit of equity in the built environment, and the intersections of data and design, and data's impact on architecture and building. This sense of engagement is not new: the disciplinary knowledge and excellence cultivated at GSAPP has long been channeled into and developed in relation to the University within which it sits, and towards the city outside its walls.

GSAPP faculty, whether tenured or tenure-track, whether in the Professor of Professional Practice or the Lecturer in Discipline track, or teaching as adjunct, are offered as much support as possible to ensure their ability to pursue research and advance their practices in ways that contribute to both the School as a pedagogical and intellectual environment as a whole, and to the students who enable their teachers to always be at the forefront of issues surrounding architectural education and the profession. This support takes the form of significant assistance towards publications, events, exhibitions, and the attendance of conferences, among numerous other forms. Faculty are also supported through forms of mentorship and/or judiciously-timed leave so as to ensure a sustainable work load and the capacity to build teacher-student relationships that foster student achievement.

#### **i. Current Faculty**

There are 36 full-time faculty members at GSAPP (including the Dean). The faculty is comprised of three appointment types: tenured and tenure-track, Professors of Professional Practice (PoPP), and Lecturers in Discipline (LiD). The 21 tenured and 7 tenure-track faculty make up the majority of the full-time faculty. Their focus ranges from traditional academic research to research-based practice to practice-based research. GSAPP also has 6 faculty in the PoPP line, which was approved by the University Senate in 2012. PoPP faculty at GSAPP are intended to be at the forefront of their field—committed to an active professional practice, to questioning the nature of contemporary practice, and to exploring these questions through pedagogy. Two LiD faculty were appointed in July 2018 shortly after this faculty line was approved. LiD faculty at GSAPP are equipped with in-depth knowledge and specific expertise, contributing to the school primarily through their teaching and pedagogical approaches as well as through non-traditional forms of practice.

With these three faculty lines, GSAPP strives to support and enlist leading practitioners, researchers, theorists, and educators, who are often working within and between these categories altogether. The diversity of perspectives among the school's faculty fosters the stimulating, challenging, and collegial educational environment at GSAPP—an environment which is also strengthened and

complemented by the 350 to 375 rotating adjunct faculty who bring fresh expertise, energy, and varied outlooks to the school each year.

The full-time faculty resumes and the required faculty matrix (for the past two years prior to the preparation of the APR) is included in Section 4 of this report: Supplemental Material.

More information about GSAPP Faculty can be found at:  
[https://www.arch.columbia.edu/faculty?by\\_group](https://www.arch.columbia.edu/faculty?by_group).

## **B. Faculty Support**

Generational, cultural, and intellectual shifts in the field have led to increased competition between schools of architecture to attract and retain both established and emerging scholars and practitioners. The School's strengths lie in the collegial community around it, in the liveliness of its intellectual life, and, of course, in the city, to which the School contributes its culture and life while harnessing its energy, density, and diversity.

GSAPP has strived to function as a supportive apparatus that recognizes valued contribution and sustained academic productivity through the careful and judicious combination of grants, University housing or housing supplements, and financial supplements for school support for children, as well as continued collaboration with the University to secure coveted spots at the School at Columbia. In addition to the regularly scheduled sabbatical for tenured professors, senior faculty are granted extended leaves and significant financial assistance, ranging from partial to full salary, on leaves that would have otherwise been unpaid—allowing faculty to pursue independent research projects and/or a period of needed refreshment with support from GSAPP. The School has also continued to offer one-semester-paid faculty development leaves for all junior faculty. The School has sought a level of flexibility, accommodating faculty in need of less or more teaching in order to support their scholarly research and/or practice endeavors. Since the 2014–2015 academic year approximately \$1.4 million in individual research grants have been awarded to full time faculty, with 56% of awards going to M.Arch faculty with individual annual awards ranging from \$10k to \$20k.

### **i. Faculty Mentorship**

The value of faculty mentoring has come into focus in the last few years and, in consultation with the Vice Provost for Faculty Diversity and Inclusion, formal guidelines for Faculty Mentorship were finalized in the Fall of 2016 by the School's Executive Committee (EC). The main goal of GSAPP's mentorship program is to ensure the retention and promotion to tenure of the School's junior faculty. Currently, all tenure-track faculty are working with two mentors, who are selected by the Dean in consultation with the Program Directors and the junior faculty themselves. The Faculty Mentorship program provides opportunities for semi-structured interactions between senior and junior faculty. Now that the program has been in place for multiple years, the Senior Associate Dean of Administration and Faculty Affairs and Assistant Dean of Faculty Affairs meet individually with tenure-track faculty to discuss the program, receive feedback, and revise it as necessary.

The goal of Faculty Mentorship at GSAPP is to generate meaningful connections between junior and senior faculty across programs, and is an effective tool for providing junior faculty members with support and advice about success at Columbia University. The School is currently developing strategies for mentoring PoPP and LiD faculty to prepare these faculty lines for reviews and engender positive development at the school.

Tenure Track and Tenure Requirements at the University can be found with Faculty Mentorship and Tenure-Track Guidelines in Section 4 of this report: Supplemental Material.

More information about University Tenure Review Guidelines can be found at:

<https://provost.columbia.edu/content/tenure-review-guidelines>.

The University Guide to Best Practices in Faculty Mentoring can be found at:

<https://provost.columbia.edu/sites/default/files/content/MentoringBestPractices.pdf>.

### **C. Faculty Professional Development**

GSAPP recognizes the importance of supporting the intellectual and professional pursuits of its faculty. Many of the M.Arch faculty, including tenured and tenure-track professors and, of course, Professors of Professional Practice, maintain their own architecture or consulting practices and are active professionals. The School aims to assist faculty and support their academic and professional development through connecting faculty to publication opportunities with Columbia Books on Architecture and the City (CBAC)—the architecture press operating out of GSAPP—as well as supporting faculty participation in conferences at other institutions, giving faculty time and space to organize lecture series and conferences at GSAPP, supporting research endeavors, and finding opportunities to support and make their practices visible in the professional realm.

#### **i. Conferences and Colloquia**

GSAPP is committed to supporting the professional and scholarly developments of its faculty. In addition to support for their attendance at professional and academic conferences, as well as support for external fellowships and grants they may be applying to—given through actions such as complementing funds or adjusting course load and leave opportunities and timelines—the School also supports faculty advancement by enabling them to host large-scale conferences and symposia. These conferences are often turned into publications, published either exclusively by GSAPP’s imprint Columbia Books on Architecture and the City (CBAC), or in partnership with other well-regarded architectural publishers who may be positioned to support a faculty’s promotion to tenure.

Such large-scale and/or multi-year conference support has included, for example, Associate Professor David Benjamin’s research on embodied energy of materials. This research was first supported through outside funding as the Embodied Energy Initiative launched in 2015 and later became the focus of a large-scale conference “Embodied Energy and Design,” which took place in the Spring 2016 and which gathered architects, engineers, scholars and other experts from the field. The result of this conference was the publication of the book *Embodied Energy and Design: Making Architecture Between Metrics and Narratives* by Columbia University GSAPP and Lars Müller Publishers in 2017, which supported Associate Professor Benjamin’s promotion to tenure.

Other such conferences include “Housing the Majority” (2015) and “Acts of Design: New Paradigms in North America” (2018), which cemented Hilary Sample’s leadership on the question of housing at GSAPP and beyond, and supported the endowment of her position as the IDC Foundation Professorship of Housing Design, the first endowed professorship dedicated to the Architecture program. Professor of Professional Practice Juan Hereros’s research into professional practice and specifically emerging practices from around the world led to two conferences—“Constructing Practice” (2017) and

“Constructing (Engaged) Practice” (2019)—and is now being developed towards a publication by the same name. Similarly, Mabel O. Wilson, Nancy and George Rupp Professor of Architecture, Planning and Preservation and Professor of African American and African Diaspora Studies at Columbia, held a workshop in 2016 exploring the intersections of race and modern architecture, which resulted in pioneering scholarship and the 2020 publication of the already seminal collection of essays *Race and Modern Architecture: A Critical History from the Enlightenment*, in collaboration with co-editors Irene Chang, Associate Professor of the Architecture Program at California College of the Arts, and Charles Davis, Assistant Professor of the Department of Architecture at the University at Buffalo. The launch of this book was the subject of another important conference at GSAPP in Fall 2020.

More information on these seminal conferences can be found at:

Embodied Energy

<https://www.arch.columbia.edu/research/initiatives/5-embodied-energy>

Housing the Majority

<https://www.arch.columbia.edu/events/44-housing-the-majority>

Acts of Design

<https://www.arch.columbia.edu/events/1105-acts-of-design-new-housing-paradigms-in-north-america>

Constructing Practice

<https://www.arch.columbia.edu/events/747-constructing-practice>

Race and Modern Architecture

<https://www.arch.columbia.edu/events/1952-race-and-modern-architecture>

## ii. Publications

Columbia Books on Architecture and the City (CBAC) is uniquely positioned to broadcast ideas incubated at the School and by faculty. Approximately a third of its books stem from initiatives and research projects at GSAPP. Recent examples of symposia-turned-publications include Dean Amale Andraos and Adjunct Assistant Professor Nora Akawi’s *The Arab City: Architecture and Representation* (2016); Associate Professor David Benjamin’s *Embodied Energy and Design* (2017); Lecturer in Architecture Mark Wasiuta’s *Documentary Remains* (2018); Professor Laura Kurgan’s *Ways of Knowing Cities* (2020) and *Paths to Prison: On the Architectures of Carcerality* (2020) edited by Director of Publications Isabelle Kirkham-Lewitt. James Marston Fitch Assistant Professor Erica Avrami’s three-volume series entitled *Issues in Preservation Policy* (2021); Assistant Professor Leah Meisterlin’s conference “Digital Urbanisms and Director and Professor of Historic Preservation Jorge Otero-Pailos’s 2021 Fitch Colloquium “The Art of Preservation: Engaging and Amplifying Underrepresented Heritage” are forthcoming publications.

Several books published by CBAC have stemmed from the writings or projects of GSAPP faculty as well. These include Associate Professor of Professional Practice Mario Gooden’s *Dark Space: Architecture, Representation, Black Identity* (2016), Ware Professor Emeritus Kenneth Frampton’s *Wright’s Writings: Reflections on Culture and Politics, 1894–1959* (2017), Professor Richard Plunz’s *City Riffs* (2017), and Lecturer in Architecture Enrique Walker’s *The Ordinary: Recordings* (2018). CBAC has also published and/or provided consistent editorial support on a range of serial projects cultivated within the various programs of the School—ranging from IDC Foundation Professor of Housing Design Hilary

Sample's "Transcripts on Housing" series, which has produced two volumes to date, to Professor Kate Orff's "Urban Innovations" series spotlighting projects by Ms.AUD faculty, which has produced *Water Infrastructure: Equitable Development of Resilient Systems* (2016). In addition, seminars that have produced a sustained, multi-year body of research have been supported in their publication through CBAC's print-on-demand platform. These projects include Adjunct Associate Professor Luis E. Carranza's teaching on radical functionalism in Mexico and Adjunct Associate Professor Kaja Kühn's teaching on planning in the Hudson Valley. CBAC has also recently published a book by Associate Professor of Professional Practice and Director of the Ms.AAD program Andrés Jaque entitled *Superpowers of Scale* (2020), which documents Jaque's recent performances, research projects, installations, films, and characters.

### **iii. Exhibitions and Biennales**

Given the prominence of biennales in advancing the field of architecture and in providing important platforms for faculty to develop their work, starting in 2015, the School established a fund to encourage faculty participation in exhibitions and biennales. To date, it has granted \$281,000 in individual awards ranging from \$10k to \$25k per award. Faculty have participated in the Venice Architecture Biennales, the Chicago Architecture Biennales, the Shenzhen-Hong Kong Biennales, and the Shanghai and Seoul Biennales—as well as in exhibitions around the world. Recent faculty support for exhibitions includes Assistant Professor Ziad Jamaledine's historical research on the architectural typology of the mosque, entitled *Building the Mosque*, which was presented at Studio-X Istanbul (2017) and the *Right to Shade* presented at Sharjah Architecture Triennial (2019); Adjunct Professor Tatiana Bilbao's *Not Another Tower* exhibition entry for the Chicago Architecture Biennale (2017), which enlisted her students from GSAPP's Advanced Studio, entitled "Highrise of Homes" (2016) to re-imagine housing potentials for the global south; the support of the work of the Housing Lab, bringing together adjunct professors Adam Frampton and Daisy Ames in collaboration with students and research assistant Ericka Song, an M.Arch student, towards an installation of their work at the upcoming 2021 Venice Biennale, as well as support for Associate Professor of Professional Practice Mario Gooden, who was invited to contribute to the Museum of Modern Art's seminal exhibition exploring the relationship between architecture and the spaces of African American and African diaspora communities entitled *Reconstructions: Architecture and Blackness in America*. Each member of the Black Reconstruction Collective was also invited to participate in his installation and performance, *Black Holes Ain't So Black*, at the exhibition *TIME SPACE EXISTENCE* in Venice, which is organized by the European Cultural Centre, and will be presented this May 2021.

A complete list of exhibition support to faculty is provided in Section 4 of this report: Supplemental Material.

### **iv. Research Support**

GSAPP faculty have a wide-ranging portfolio of awards from sponsors including the federal government, foundations, industry, and international contracts from foreign entities. The School aims to assist faculty research more directly through seed funding as well as paying for student research assistants and does its best to mobilize its various public-facing platforms and infrastructure of centers, labs, and initiatives to amplify and support faculty research trajectories.

Numerous GSAPP faculty have also benefited from faculty grants awarded (\$208k) by Columbia University's Office of the Provost and Office of the President which supports outstanding full-time faculty with career development or who contribute to the diversity goals of the University through their research,

teaching, and mentoring activities. In Fall 2020, as mentioned in Section I.1.3: Social Equity, Junior Faculty Grants were awarded to architecture faculty members Assistant Professor Ziad Jamaledine for his research proposal *Building the Mosque: Sub-Saharan African Models* and Assistant Professor Lola Ben Alon for her research proposal *The Environmental and Social Life Cycle Potential of 3D Printed Earthen Buildings*. We have had six faculty members receive this type of funding in the last six years. Faculty have been able to take advantage of additional funding opportunities at the University, including the President's Global Innovation Fund offering support for faculty to develop projects and research collaborations within and across the University's nine Columbia Global Centers, in service of increasing global opportunities for research, teaching, and service; the Collaboratory Fellows Fund to support innovative curriculum development that meets the data and computational literacy needs of a disciple or cohort of students; and the Office of the Provost Addressing Racism Seed Grant, which engages with issues of structural racism by providing resources to enable collaborative dialogue, action, and insight to produce systemic change towards racial equity.

A list of past and projected faculty research, scholarship, creative activities by full-time instructional faculty is provided in Section 4 of this report: Supplemental Material.

#### **D. Architect Licensing Advisor**

GSAPP's current Architect Licensing Advisor (ALA) Coordinator is Adjunct Professor Paul Segal, Coordinator of the M.Arch Professional Practice Sequence. The Architectural Experience Program (AXP) at GSAPP is led by Segal, who also teaches the required Professional Practice course.

Professor Segal, FAIA, is founding and senior partner in charge of hundreds of projects, seventeen of which received AIA Design Awards from the American Institute of Architects New York State. He also received a Fellows Award for advancing the philosophy of mentorship within the profession and held the position of the President of the American Institute of Architects/New York Chapter between 1985–1986 and New York Foundation for Architecture (now the Center for Architecture) between 2002–2004.

Professor Segal teaches students varied professional skills—from how to protect their designs and get them built as they envision them to how to market architectural services, set up an office, charge for services, and manage zoning and building codes. As a result of his extensive experience and deep commitment to support GSAPP students since he started to teach at the School in 1986, Professor Segal assembled a textbook to support his professional practice course entitled *Professional Practice: A Guide to Turning Designs into Buildings*, which he adapts and updates on a yearly basis, following his regular attendance to ALA training and development programs.

Professor Segal is in regular communication with students both through scheduled office hours and email communications throughout the year. In addition to the AXP presentations scheduled each year in his Professional Practice course, Professor Segal schedules several other relevant presentations and is the faculty advisor for the two students who serve as Career Services assistants.

More information on GSAPP's Architectural Experience Program can be found at:  
<https://www.arch.columbia.edu/career-services>.

## **E. Student Support Services**

### **i. Academic Life and Advising**

GSAPP aims to cultivate a culture of openness between its students and the administration. The Academic and Student Affairs Office maintains an “Open Door Policy,” which encourages students to visit administrative offices during business hours without making appointments and pushes the administration to solve problems as soon as they arise. To further support its close academic community, GSAPP provides multiple channels of support and care online, in person, and after hours.

Faculty, alumni, and administration share the responsibility of supporting students at GSAPP—and all participate, formally and informally, as advisors at the School. Advising at GSAPP is multifaceted: students receive mentorship and support at various points in their academic career through various channels. The Academic and Student Affairs Office liaises with multiple University-wide student services, and students meet with upper-class student advisors, studio mentors, studio critics. The Dean of Students, Sequence Program Directors and Managers, and the Career Services staff all participate in required advising sessions.

Faculty members are available for academic advising via traditional and formal office hours. These appointments are intended to formalize academic advice and keep students on track toward graduation. The structure of studio fosters a space for disseminating academic advice as well: each studio critic is present ten to twelve hours a week and works directly with a small group of eight to twelve students. Student Mentors are also formally assigned to studio sections and are available in studio and outside of class hours to support incoming first-year students as well as international students in their transition to the US academic studio system. Studio Mentors meet regularly with students to offer peer-to-peer advising on everything: from where to buy supplies to techniques for drawing, scripting, printing, and model making.

The culture of mentorship at the school is also visible in the peer-to-peer skill-sharing or skill-swapping that takes place between and within programs. The Academic and Student Affairs Office helps coordinate skill-swapping between programs as well as academic tutoring (with faculty or peer tutors) as needed and requested. Peer Advisors—typically second- and third-year students—run student-only group events and one-on-one meetings with individual students throughout the academic year to supplement the advising offered by GSAPP faculty and administration. For instance, an all-M.Arch student meeting is held following the completion of the first semester’s Core I Studio. This event is run by students for students with no administration or faculty present. Upper class students take this opportunity to be candid with first year students about their experiences at the School and to offer advice ranging from portfolio development, archiving digital work, and how to best prepare for their Comprehensive Design Review.

Comprehensive Design Reviews, a formal advising session, takes place at the completion of a M.Arch student’s second year. Students are required to present their Core Studios work to a group of architecture design faculty. This is an opportunity for students to receive feedback and advice before entering into their final year of the M.Arch program. A formal evaluation form is also submitted digitally to the Office of Academic and Student Affairs via the Slate online system.

While it is a touchstone for students in the program, the Comprehensive Design Review is just one instance in a longer series of portfolio events held each semester by the Advanced Design Studio coordinators, Office of the Dean of Students, Student Council, alumni, and Career Services. Portfolios at GSAPP are not intended to be produced in a vacuum but are developed in dialogue, and are reviewed bi-annually by studio critics before Comprehensive Design Reviews take place.

To support students in developing their portfolio towards graduation, additional portfolio reviews and advising occurs in conjunction with the Graphics Project: an annual series of lectures, discussions,

and workshops that offer basic and advanced skills towards portfolio design while also expanding on the role of graphic design within the field of architecture. Over two weekends, emerging and established graphic designers from around the city are invited to “examine various methods of visual communication used to convey concepts to both specialists and general audiences. These events aim to help students build a successful graduation portfolio while simultaneously unpacking the topics, tools, and trends of contemporary graphic design. Alongside emerging designers who lead the workshops, the Graphics Project brings world-renowned speakers to GSAPP. It is currently run by Adjunct Assistant Professor Yoonjai Choi of New York-based studio Common Name, in collaboration with the Academic and Student Affairs Office.

In addition to the School-wide support offered by the Academic and Student Affairs Office and the informal Open Door Policy, all M.Arch students meet regularly with members of the administration, sequence directors, and the Dean to address any issue or concern that arises, explore new curricular and extra-curricular ideas, and strive to maintain communication between the leadership of the program and the student body. Formally, individual students also meet with the Associate Dean of Academic Affairs semesterly while in their first three semesters and annually in their last three semesters of the Program.

Degree requirements and satisfactory academic standing and progress are continuously reviewed and tracked as part of GSAPP’s online platform Slate. The Academic and Student Affairs Office also manages GSAPP’s academic calendar, course schedules, registration, grading, room schedules and online course management system (Canvas), amongst others, and is able to centrally offer support on a plethora of student life issues. In consultation with the Associate Dean for Academic and Student Affairs and the Academic and Student Affairs Office staff, students are directed to a wide range of available resources at the School and within the University.

The GSAPP Office of Academic and Student Affairs also acts as an advisor to all recognized student organizations within the School and meets bimonthly with each student group. The Office’s role is to facilitate co-curricular programming, student-led initiatives, and activities that support academic, professional, civic, and community engagement in addition to promoting the diverse interests of the GSAPP community. The Office of Academic and Student Affairs also oversees and approves all registered student organizations and initial event programming requests.

More information about M.Arch Student Advising can be found at: <https://www.arch.columbia.edu/march-advising>.

More information on the Graphics Project can be found at: <https://www.arch.columbia.edu/graphics-project>.

More information about Student Groups and the Student Groups Handbook can be found at: <https://www.arch.columbia.edu/student-organizations>.

A comprehensive list of student resources can be found at: <https://www.arch.columbia.edu/student-resources>.

## **ii. Feedback and Course Evaluations**

GSAPP has formalized several systems to gather student feedback on the academic and supportive functions of the School to ensure that student needs are met. These systems provide proper channels of representation and encourage ongoing communication. That said, GSAPP welcomes feedback at any point in a student’s academic career: students can always submit their concerns in writing to the Dean of

Students at [feedback@arch.columbia.edu](mailto:feedback@arch.columbia.edu) and the Dean of Students will work with the appropriate administrator or faculty member to address the issue.

Course evaluations are completed by students each semester. The results of these evaluations are analyzed by the Academic and Student Affairs Office, alongside the Associate Dean for Academic Affairs, the appropriate Program or Sequence Director, course instructor, and the Dean. If any recommendations are identified, the Dean, the Associate Dean for Academic Affairs, and/or the Program Director meet to discuss implementation.

Student work is also assessed after the completion of studio by studio critics. All studio critics are expected to complete evaluations of students in their section and/or have meetings to discuss studio performance in person, including exit interviews at the end of the semester. A record of these evaluations is kept in the School's online Slate System, which allows the School to continue to support its students as best as possible and monitor any issues that may arise. These evaluations also offer an important way of evaluating students across their time at the School, both enabling individuals with exemplary work to be eligible for Teaching Assistantships and ensuring that students who do not meet the Program's standards are given the necessary assistance as soon as possible to help them succeed in future semesters.

### **iii. Student Life and Wellness**

The Associate Dean for Academic and Student Affairs facilitates access to University services, medical or otherwise, and acts as a safety net to resolve problems. In the event that a student expresses or experiences mental distress, a member of the administration will immediately escort and accompany them to counseling services to ensure that they receive the proper attention without delay. Health and wellness is continually fostered through communications and events. Students are reminded to take advantage of the University's many resources that support physical health and mental wellbeing. These resources can be found below and include many new support groups that were added in response to student suggestions. In 2020–2021, additional initiatives and virtual events were also launched by the Office of University Life in light of COVID-19.

GSAPP collaborates with the Office of Equal Opportunity and Affirmative Action (EOAA) at Columbia University to guarantee that students are familiar with the policies and resources available if they experience harassment or discrimination. All GSAPP policies and resources are available on the website, as well as University confidential reporting resources. Additionally, GSAPP works closely with several other University offices, including but not limited to the Office of University Life, Student Health Services, Disability Services, Counseling and Psychological Services, University Housing, Student Conduct and Community Standards, and the International Student and Scholars Office.

GSAPP is well-equipped to provide support to students who face a wide range of issues, and someone is available 24/7 for emergencies within Columbia University Health Services, Public Safety, and on call at GSAPP. We recognize that students may also need material support in certain situations, so we maintain emergency university housing allocations and work with Columbia Residential to quickly move students into new apartments and marshal the many resources of GSAPP and the University on their behalf. In 2021, GSAPP also extended its COVID-19 emergency fund, establishing the GSAPP Emergency Fund which will continue to be available to students in need after the pandemic. The Student Affairs team flexibly works with students to make their time at GSAPP a safe, meaningful, and enlightening experience.

More information on support services including student support groups offered by Columbia University Student Life can be found at:

<https://health.columbia.edu/content/support-groups>.

More information on Columbia University student life and support services can be found at: <https://www.universitylife.columbia.edu/student-resources>.

More information on the GSAPP Emergency Fund can be found at: <https://www.arch.columbia.edu/covid-19-emergency-fund>.

A comprehensive list of GSAPP policies and student resources can be found at: <https://www.arch.columbia.edu/policies-resources>.

#### **iv. Student Organizations**

There are currently many student groups at GSAPP and many opportunities to create new ones. Student groups are extra-curricular, offering students the opportunity to explore their passions, generate interdisciplinary conversations, reflect on their experiences, and amplify and organize around diverse voices and perspectives outside of coursework. While new groups form each year in response to the needs and desires of the current cohort of students, there are groups that have continuously operated for decades and that have become long-standing traditions of the School, such as 6 on 6. GSAPP maintains an up-to-date list of student organizations, along with their contact information, on the School's website. Student groups are able to send announcements and invitations to targeted audiences, specific programs, and/or the entire school through the Academic and Student Affairs Office; the Office also actively disseminates information to GSAPP students about group opportunities within the larger university. GSAPP's student groups, new and old, are a vital expression of the School, and the School works to support them in a variety of ways: with the guidance of faculty advisors, through communications, event organization, space allocation, exhibitions, and financial resources.

Student groups at GSAPP include GSAPPX+ (formerly GSAPPXX), a women-run chapter of ArchiteXX, a national nonprofit organization promoting gender equity in architecture; and QSAPP (Queer Students of Architecture, Planning, and Preservation), a student organization fostering conversation and community among LGBTQ students, their allies, faculty, and alumni. In addition to meetings, both groups host workshops, lectures, and events at the school. Each year, GSAPPX+ hosts a lecture by a well-established female architect and designer, as well as a panel conversation; recent events have featured Beatriz Colomina, Alessandra Cianchetta, and Neri Oxman. QSAPP has also organized panels on timely topics, including "Safe Space: Creating a Residence for LGBTQ Homeless Youth"; "Stonewall: Preserving LGBTQ Landmarks"; "Planning For, With, and By the LGBT Community"; and the installation *Coded Plumbing* at GSAPP's *End of Year Show*.

The Black Student Alliance at GSAPP (BSA+GSAPP) was formed in Fall 2018, with initial meetings and networking events for both current students and alumni. The group's aim is to support the advancement of students who self-identify as members of the African diaspora and the goal is to provide a community and source of collegial support mechanisms at GSAPP that actively promote the interest of the Black students, alumni, and future students. It is also the aim of the organization to provide a platform for the promotion of scholarship and creativity in writing, architecture, design, real estate, finance, urban planning, historic preservation, and the allied arts. BSA+GSAPP recently hosted a symposium in Fall 2020 entitled "House & Home," as well as co-hosted GSAPP's public lecture by the Black Reconstruction Collective (BRC).

LatinGSAPP was also formed in 2018 to raise awareness on the importance and timeliness of impactful practice and research in the region of Latin America and by Latin Americans across the globe and to encourage cooperative involvement. LatinGSAPP has had extensive success organizing events

within GSAPP as well as collaborating across campus and with other institutions. Recent events include “Agency in Architecture,” which explored political agencies and authorship in architecture. The event was a cross-school collaboration between LatinGSAPP and Yale School of Architecture’s NOMAS as part of the “Latinx Features: Spring 2021 Roundtable Series” organized by YaleNOMAS.

Most recently, students expressed an interest in launching a new group for students entitled Masaha, a student association that investigates contemporary issues facing the Arab world. The association aims to connect creative students across disciplines to contribute to the improvement and development of scholarship that focuses on the Arab world.

A comprehensive list of current Student Organizations at GSAPP can be found at:

<https://www.arch.columbia.edu/student-organizations>.

#### **v. Extracurricular Activities**

GSAPP strives to make time outside of the classroom meaningful and enlightening for its students. In addition to student organizations, traditional campus life services such as athletics at Dodge Fitness Center, the CU Arts Initiative that connects students with the Arts at Columbia and throughout NYC, extracurricular opportunities are always encouraged and available to complement the GSAPP student experience. These opportunities allow students to interact with the Columbia community as well as take advantage of being in New York City.

Since 2014, for example, GSAPP has regularly published a “GSAPP Recommends” brochure which highlights events—lectures and art and architecture shows amongst other—on campus as well as across the city. These recommendations are also part of the School’s regular weekly communication, which gathers events and resources, such as reading recommendations and event announcements, from within and outside the School.

In 2020–2021, while the School operated in a hybrid modality, GSAPP fostered informal social opportunities for students and faculty to come together and connect. To continue conversations among the GSAPP community beyond campus, Virtual Studios were made accessible to students and faculty for formal and casual discussions on a 24/7 basis. The forty-year tradition of 6 on 6—a happy hour that formerly took place on Fridays at 6 PM on the sixth floor of Avery—continued remotely along with new social initiatives including Cocktails and Conversations, giving students the opportunity to meet with faculty outside of the curricular focus of the classroom and studio setting. Other extra-curricular opportunities to connect included Ask a Recent Grad: An Informal Q+A, virtual yoga, virtual tours of NYC hosted by mentors and faculty, and in-person Morningside Park clean-ups and exercise bootcamps.

More information on the CU Arts Initiative can be found at:

<https://artsinitiative.columbia.edu>.

An archive of GSAPP weekly newsletters during COVID-19 and throughout the 2020–2021 year can be found at:

<https://www.arch.columbia.edu/news>.

More information on the Virtual Studios can be found at: <https://www.arch.columbia.edu/hybrid-pedagogy/virtual-studios>.

## **vi. International Student Support**

To better support international students at GSAPP, GSAPP has established an ongoing collaboration with the American Language Program (ALP) at the University. The ALP offers workshops to all incoming GSAPP students. For the M.Arch program, these educational workshops are focused on the Design Studios where international students explore how best to present and communicate their work in English, both visually and verbally. While the workshops are principally focused on language and communication, they also address intercultural awareness and expectations for working with others in a studio setting—contextualizing certain biases and rhetoric around gender, sexual orientation, race, ethnicity, among others, and equipping students with a framework through which to approach their interactions at the School and beyond with respect, cultural sensitivity, support and increased allyship for one another.

More information on the American Language Program can be found at:

<https://sps.columbia.edu/academics/english-language-programs/american-language-program/american-language-program/american>.

More information on the International Student and Scholars Office can be found at:

<https://isso.columbia.edu>.

## **vii. Travel**

Since the establishment of the William Kinne Fellows Fellowship Endowment in 1952, travel has become a fundamental aspect of student life at GSAPP and one of the major ways that the School distinguishes itself from other graduate programs. Opportunities for travel are integrated into the school's curricula, via studios and seminars, and run adjacent to its curricula, via sponsored Summer Workshops. Every student, no matter which program they are in, will travel at least once during their time at the school. To offset the cost of travel, students are provided with travel stipends. Additionally, GSAPP supports and funds travel for educational opportunities outside of the school. For the M.Arch program in particular, opportunities for travel are designed to increase in scope—from focusing on New York City in the Core Studios to expanding regionally in Advanced Studio IV and then opening up to some national and international travel in the Advanced Studios V and VI.

M.Arch students travel a minimum of two times during the program in the Design Studio Sequence. The first trip takes place in the Core Studio III Housing and the second takes place in the Advanced Studio VI. In the 2018–2019 academic year as part of the Advanced Studios V and VI, students traveled to Nevada (USA), Tunis (Tunisia), Seville (Spain), Reykjavik (Iceland), Santiago (Chile) and in the Spring semester to Rome (Italy), Sydney (Australia), Moscow (Russia), Shanghai (China), Tokyo (Japan), Los Angeles (USA), Rotterdam (Holland), Madrid (Spain), Vieques (Puerto Rico), Sao Paulo (Brazil), Athens (Greece), Hanoi (Vietnam), Merida (Mexico), Jerusalem, London (England), Lisbon (Portugal), Brasilia (Brazil), Beijing (China). Beyond providing the opportunity to explore potential studio sites in person, studio travel opens questions about what it means to practice and think in a global context—introducing the complexities that ensue as an integral part of the design process.

Travel is also vital to many of GSAPP's seminars. Adjunct Assistant Professor Nora Akawi's seminar "Echoing Borders"—which focuses on the figure of the refugee and on problematic understandings of territoriality that divide the world into compartmentalized, distinct, and seemingly mutually exclusive formations—recently traveled to Cyprus, Jordan, and Tel Aviv. Adjunct Associate Professor Luis E. Carranza's seminar "Modern Architecture in Mexico" introduces students to the artistic, social, political, economic, and historical complexities that frame Mexico's post-war architectural

production and relies on travel to Mexico City in order to visit the both canonical and overlooked projects that express these complexities. Lecturer in Architecture Mark Wasiuta's seminar and studio "Collecting Architecture Territories," which reflects on the relationship between architecture and collecting, traveled to a range of cities in spring 2017, including Doha, Mexico City, Shanghai, Rio de Janeiro, and Milan.

As part of GSAPP's global mission, Summer Workshops foster open dialogue and cultural exchange and encourage collaborative research addressing urgent topics of our time. Every year faculty-led research workshops assemble students from across the School's programs for an intensive study opportunity that revolves around a particular question in a global location. Summer Workshops present students a unique chance for cross-disciplinary collaboration, firsthand experience, and global engagement with real situations. As a sign of the Summer Workshops' success, many students carry their research into studio and future projects, as well as into research opportunities with faculty.

More information about Student Global Travel can be found in Section 4 of this report and at: <https://www.arch.columbia.edu/global>.

More information about current and past Summer Workshops can be found at: <https://www.arch.columbia.edu/summer-workshops>.

#### **viii. Alumni-Student Mentorship Programs**

Now in its seventh year, the Student-Alumni Mentorship Program connects students with alumni based on mutual interests, geographic preferences, and professional backgrounds—in turn reconnecting GSAPP alumni with the school. Initiated by the GSAPP Alumni Board, the school now matches approximately 200 current students annually to alumni mentors based in NYC and around the world. An alumni mentor is not an academic advisor or tutor; they are an experienced ally who can provide personal and individual guidance and support on professional issues. Through these relationships, students are invited to learn more about the professional lives of their mentors, exposing the students to the wide variety of career opportunities available post-graduation. The program aims to help students identify, clarify, and achieve their goals. The program is facilitated across all programs within the school, and students can request a mentor in a particular field, regardless of the program of study. Beginning in 2021, alumni may volunteer to mentor a student affiliated with a current student group.

Since 2015, more than 750 student-alumni relationships have been facilitated through GSAPP. The program has connected students with alumni domestically and internationally in New York, Mexico City, Denver, Dallas, Los Angeles, London, Colombia, Philadelphia, Chicago, San Francisco, and Detroit. It has also connected generationally diverse alumni, matching students with alumni mentors from as far back as the 1970s through recent years.

Peer Pairings is a student-led mentorship program developed by the student organization GSAPPX+. Born out of a need to address community-building and socialization related to impacts of COVID-19 and remote learning, students opt-in to be paired by program, year and/or interest for more informal social mentoring.

#### **ix. Career Services**

Career Services at GSAPP strives to support students in their transition from the academic to the professional world beyond the school and ensures that prospective employers are aware of the school's talented student body. Career Services does not begin as students prepare to leave GSAPP but is a consistent and available resource throughout their course of study. Each degree program at GSAPP has

a dedicated Career Services contact who work collaboratively as a team while meeting their respective students individually and creating programming tailored specifically to each degree program. Career Services hosts annual career fairs and networking events; reviews cover letters and resumes; offers career counseling sessions; connects students to alumni; and sends out weekly notices to highlight relevant job postings and programming. In 2020, the Career Services team began collaborating with the Alumni Relations office to host an Alumni Conversation series, a series of fifteen small format virtual discussions, inviting alumni to share a professional project. In response to student requests, the series features alumni whose work is primarily connected to issues of equity, climate, and who may be working within a not-for-profit organization.

Students enrolled in multi-year programs who wish to apply their academic expertise and skills in a real world setting during their studies can enroll in the Elective Internship program. Elective Internship is a one-and-a-half-credit course that provides students with the space in their academic schedule to gain real-world experience, to work with practitioners and industry experts, and to expand their knowledge of the current state of the field. These internship opportunities help students cultivate connections outside of GSAPP and in professional networks while they are still immersed in school. All GSAPP students are eligible for Elective Internship after completing two consecutive semesters of graduate-level courses. Therefore, most students take the course during the spring or summer semesters. Students must work a minimum of eighty hours per semester and can work up to twenty hours per week during the school year and full-time during the summer. The course requires students to analyze their progress through bi-weekly write-ups to reflect on work advancement, skill development, and their connection to current coursework. Career Services also supports students in finding paid internships. Exit surveys are administered to graduating students to collect student feedback and track career outcomes for future use.

More information about the Alumni-Student Mentorship Programs and Career Services can be found at: <https://www.arch.columbia.edu/career-services>.

### **I.2.1. Physical Resources**

#### **A. Facilities**

Most of GSAPP's facilities are located in Avery Hall and in connected adjacent buildings: the 200 and 300 level of Fayerweather Hall and the Underground Avery Extension, and the 100 and 600 levels of Schermerhorn Hall. This complex of buildings houses design studios, classrooms, computer labs, exhibition galleries, the Avery Architectural and Fine Arts Library, audio-visual facilities, the Making Studio (3D printing and 2d printing shops), the GIS lab, GSAPP Cafe, faculty and administrative offices, six rooms of various sizes for juries and lectures, and two lecture halls (equipped for multimedia and video presentations including interactive video conferences). Some faculty offices, two jury and seminar rooms, three galleries, and the Temple Hoyne Buell Center for the Study of American Architecture are located nearby in Buell Hall, which also houses the Maison Française. The School's Arthur Ross Architecture Gallery, a museum-quality gallery devoted to architectural exhibitions, is also located on the first floor of Buell Hall.

A link to existing plans of the School's facilities is provided in Section 4 of this report: Supplementary Material.

**i. Studios and Classrooms**

The studio spaces for the M.Arch program are located on the 500, 600, and 700 levels of Avery Hall. There are two open, well-lit studio spaces per floor—allowing each year of the three-year M. Arch program its own space, while also affording considerable possibilities for interaction in the common gallery spaces between. Nearly all students work in studio in proximity to each other, which fosters a spirited collectivity. Spatially, the design studios emphasize openness and collaboration with every studio section assigned one long table for individual workspaces and another table for collective and shared desk-crits. All the desks are equipped with high-powered computer workstations. Each studio is equipped with dedicated AV equipment and BW and Color printing facilities.

Classrooms are located in Avery Hall, Buell Hall, and Fayerweather Hall. In Avery Hall, the School has two dedicated lecture halls on the 100 level with stadium seating and digital podiums that accommodate between 90 and 300 students. There are also six small well-lit seminar/pin-up rooms in Avery Hall that accommodate between 15 and 25 students each, and two medium-sized rooms that can accommodate between 40 and 60 students and are used for larger seminars and joint reviews. Buell Hall affords three additional small seminar rooms that accommodate up to 20 people. Buell Hall is the oldest structure on the Morningside Campus, and its close proximity to faculty offices makes it the most popular with the tenured faculty. Lastly, Fayerweather Hall also contains four seminar rooms that are ideal for small studio meetings and discussions. All seminar and lecture classes are assigned a classroom, and studio sections may book space as needed and request AV support as required.

More information about GSAPP's classrooms, lecture halls, and auditoriums can be found at: <https://www.arch.columbia.edu/room-reservations>; <https://www.arch.columbia.edu/fall-2020/room-schedule>.

**ii. Faculty and Administrative Offices**

GSAPP faculty offices are primarily located in Buell Hall (13), the 300 mezzanine level of Fayerweather Hall (2) and 3 Claremont (2). Averaging approximately 120 square feet each, these offices support faculty and students by providing a private space for faculty to engage in writing, research, development of curricula and also serve as a venue for meetings with students. All offices have air conditioning and are appointed with a window, a desk, chairs, file cabinets, and bookshelves. With approval from the Dean's Office, additional amenities are provided upon request based on the specific needs of individual faculty.

GSAPP faculty and administrative offices are located primarily on the 400 level of Avery Hall. These include the Office of Faculty Affairs, the Dean's Office, the Office of Academic and Student Affairs, the Office of Alumni, Career Services and Development, the Admissions Office, and the Communications, Events, and Publications Offices as well as all of the School's individual Program Offices. Clustering the administration on the 400 level of Avery Hall facilitates workflow between the various offices and centralizes the student-facing functions in one part of the building as well as enables the School's Open Door Policy. GSAPP has custom-designed and fabricated the furniture in most of the Administrative Offices to maximize efficiencies of space planning. By doing so, the footprint of the offices dedicated to administration is minimal, allowing GSAPP to dedicate more space to classes, studios, labs, and centers.

**iii. Arthur Ross Architecture Gallery**

The core of the exhibition program at GSAPP is the Arthur Ross Architecture Gallery, one of the few spaces for architectural exhibitions in the country with museum-grade climate control. In

addition to supporting an exhibition program, the Arthur Ross Architecture Gallery serves as an extension of the Design Studio and seminar spaces as faculty and students are able to host sessions outside of their usual setting, tying the content of the exhibition to the work they are exploring in class. In 2020–2021, the gallery was also transformed to enable GSAPP to extend its studio spaces and allow additional students to have access to a socially-distant environment for in-person learning.

More information about Arthur Ross Architecture Gallery can be found at:  
<https://www.arch.columbia.edu/facilities/5-arthur-ross-architecture-gallery>.

#### **iv. Temple Hoyne Buell Center for the Study of American Architecture**

The Temple Hoyne Buell Center for the Study of American Architecture is located on the third floor of Buell Hall and offers an open layout to serve as a public meeting space and reading room, primarily used by the students of the PhD program, but also by students from the M.Arch program. PhD candidates lead the discussion sections of the required first-year M.Arch History and Theory course “Questions in Architecture History I and II.” Buell Center spaces are also used for one-on-one tutoring sessions and discussion section office hours, and the Buell Seminar Room offers a kitchen and high-quality seminar room for Buell events as well as GSAPP use. Conceived as one of several high-quality, high-tech meeting classrooms that exist on the Columbia University campus, this seminar room is designed to facilitate dialogue and debate amongst students, faculty, and the public, and be flexible enough to maintain its use as a classroom, as well as capable of hosting board meetings, small lectures, or other such gatherings.

More information about the Buell Center can be found at:  
<https://www.arch.columbia.edu/research/centers/2-buell-center>.

#### **v. Cafes, Lounges and Reading Rooms**

While the School does not have a dedicated space reserved as a faculty lounge, there are several informal spaces at GSAPP and throughout the University. The cafe on the 100 level of Avery Hall, Brownies Cafe, has long served as the social lungs of the school. The cafe provides seating for up to 64 people at 16 tables, with additional seating at communal benches and coffee tables. While the food concession is open from 8AM–5PM, the cafe remains accessible to all GSAPP affiliates throughout the day and night, and on weekends. Due to its central location, proximity to classrooms, the library, administrative offices, and GSAPP galleries, the cafe also serves as the de-facto lounge for GSAPP faculty.

Additionally, the 300M Avery Reading Room—a portion of the mezzanine level—acts as a display space for Columbia Books on Architecture and the City and a myriad of GSAPP publications. Populated with chairs and a cafe table, this space has also proven to be a popular informal space within the school. Likewise, the 400 Avery lobby provides an opportunity faculty to congregate with both their peers and students.

The University offers multiple cafe options for informal meetings, including the nearby graduate cafe in Philosophy Hall which offers a bright and comfortable community space where graduate students, postdoctoral researchers, and faculty across disciplines and schools may socialize and study. GSAPP’s faculty and student favorite campus locations for both architecture and food include the stunning aluminum and glass Northwest Corner Cafe, design by M. Arch ‘91 alumni Belen Moneo and Jeffrey Brock with Rafael Moneo, the quick-stop cafe in Lerner Hall, designed by Professor and Dean Emeritus

Bernard Tschumi, and the Toni Stabile Student Center, designed by M. Arch '86 alumni Karen Fairbanks and Scott Marble.

**vi. Avery Architectural and Fine Arts Library**

Avery Library is central to GSAPP life, with its unparalleled collection of books and journals, and the archives of drawings, manuscripts, documents, letters, photographs, material samples, and ephemera. In addition, there the reading rooms, stacks, carrels, administration, copy, photography and scanning rooms. The library has extensive offsite storage for its vast holdings. As part of the network of Columbia University's libraries, Avery Library has access to the full catalogue of digital, e-periodical, e-journals and e-books available to the University and is searchable through its online portal CLIO.

The historic McKim, Mead & White reading room of the library was restored in 2003, concurrent with construction of the Miriam and Ira D. Wallach Study Center. The architectural firm ARO was commissioned in 2007 to conduct a Phase 2 program plan for the renovation of the 1970 underground extension. Proposed renovations were not approved and changes in Avery Library administration stalled further discussion of renovation for some years.

Avery Library's full catalogue can be found via Columbia University's online portal CLIO:  
<https://clio.columbia.edu>.

Avery Library's online reference assistance to GSAPP can be found at:  
<https://library.columbia.edu/libraries/avery/research-guides.html>.

**vii. Making Studio**

GSAPP has long stood at the forefront of changes in design technologies and contemporary culture. Today, computer-generated designs and models are giving way to a mode of working that blends the digital with more material and representational practices. A culture of making—whether it be a drawing, a book, a physical model, or a set of tools—is imperative to individual expression and creativity as well as to critical thinking and assembling.

The remodeled fabrication shops at GSAPP, known collectively as the Making Studio, combine a range of workshops and project spaces for fabrication, 3D printing, robotics and multi-modal making, rapid prototyping, digital cutting, and tooling, alongside a space for large-scale mockups and experimentation. Cross-program workshops and 24-hour access enable students to explore, stage, tinker, reuse, and adapt. Spaces are all housed in the lower levels of Schermerhorn Extension and include a dedicated 24-hour space, a 3D-printing and laser cutting lab, a digital and analogue Fabrication Lab, and Casting/Welding Space.

The Making Studio provides material, technical, and design support for all modeling, building, and making endeavors of GSAPP students. Its mission is to provide a continuum of support for physical experimentation and production, from heavy duty sheet goods to precision work on fine models.

Some of the available equipment includes:

- 4'x8'x12" Shopbot 3 Axis CNC router with 4th Axis indexer (rotary)
- 4'x8'x5" Techno CNC router
- 4'x4' Techno CNC Plasma Cutter
- (2x) 3'x2' Techno HD mini 3 axis CNC routers

- SawStop table saw
- Dust collection systems for the large CNC router, table saw, band saws, and sander
- A variety of power saws, drills, routers, planers, and other tools and instruments
- Various hand tools, hardware, and consumable materials
- 5x Universal Laser 75W-125W 18"x32" laser cutter
- 20x Prusa MK3 FDM 3D printer
- 5x FormLabs SLA Resin 3D printer
- 5x Stratasys Dimension FDM 3D printer (with soluble support)
- Universal Laser Systems laser cutters: four x-660 single beam 60w systems (32"x18" work/cutting area) and a x2-660 dual beam cutter (two 60w lasers and a 32"x18" work area).
- Deltabot Potterbot Clay extruder 3D printer
- PensaLabs CNC wire bender
- Formech 508 FS Vacuum Thermoforming machine
- Hobart MIG Welder
- Hobart TIG Welder
- Horizontal Band Saw
- ~1000F Crucibles
- Abrasive cutoff saws
- Covington Wet Sander
- Covington Wet Saw
- Industrial cement mixer
- Skutt 18" Cone 10 Kiln

Integral to the physical facilities for production is the digital infrastructure for design and analysis, which includes:

- Three workstations containing software as located in the design studios
- Full wired and wireless connectivity throughout the Lab
- Five seats of MasterCAM X CAD/CAM software
- Ten seats of SolidWorks parametric solid modeling software
- Unlimited seats of Rhinocam CAD/CAM software

More information on the Making Studio and the fabrication facilities can be found at:

<https://www.arch.columbia.edu/facilities/2-making-at-gsapp>.

### **viii. Preservation Technology Laboratory**

The Preservation Technology Laboratory enables cutting-edge research in preservation digital technology, materials science, and aesthetics. The lab is open to all students across GSAPP, including those in the M.Arch program, exploring issues of materiality in the context of their work at the Making Studio as well as in their Design Studios. The lab re-opened in 2019 in a fully-renovated facility and is equipped with expanded digital technology capacities, new scanning equipment (a Lucida Sub-Millimetric Scanner and drone, for example), advanced data processing hardware and software (photogrammetry), and non-destructive probing equipment (thermal cameras, humidity sensors, crack monitoring). The lab is intended to support studios and will be at the center of new M.Arch elective technology courses, such as

“Traditional Building Technology,” “Modern Building Technology,” and “Investigative Techniques for Laboratory and Field.” It will promote research into unique applications that combine materials science and digital technologies, with particular emphasis on replication and adaptive reuse, as well as the aesthetic implications of these technologies. The lab is currently and actively seeking partnerships with stewards of historic buildings to test and develop these applications in the field.

The Preservation Technology Laboratory makes equipment available to students and faculty including a deionized water supply, glassware, chemical reagents, Philips x-ray diffractometer, Nikon and Zeiss polarizing light and stereo binocular microscopes with an Infinity 2 digital cameras, DJI Phantom 3 drone, multiple Onset T/RH indoor and outdoor dataloggers, and Accumet pH and conductivity meters and a TRACER 5iTM Handheld XRF analyzer which works on x-rays diffraction and helps analyzing the elements and component of a found object. In addition, the lab houses some of the most complete and extensive historic collections of brick, sand, terra cotta, wood, and mudbrick, as well as a unique set of collections of stone samples dating back to the nineteenth century, and historic mortar and mosaic samples dating from Roman times to Frank Lloyd Wright’s Fallingwater.

More information on the Preservation Technology Laboratory can be found at:

<https://www.arch.columbia.edu/facilities/3-preservation-technology-lab>.

#### **ix. Natural Materials Laboratory (Under Construction)**

The Natural Materials Laboratory was established as part of GSAPP’s Making Studio to explore the idea of low carbon and non-toxic materials as experiments developed from entirely new design ideas. The lab operates under a new premise: that materials no longer exist as off-the-shelf solutions but as substances that can be mined and curated from readily available resources in and around the construction site, namely “farm to building,” allowing for new architectural and engineering purposes and performances. Building on the school’s legacy of exploring new technologies to advance environmentally and socially responsible architecture, the Natural Materials Laboratory has been pursuing creative interventions into existing material ecologies as a way of thinking through the specific waste streams and lifecycles of materials and building products. The questions of material economy, circularity, and health mean not only a careful selection and proposal for materials that reduce the embodied energy in the delivery of architecture, but also a reexamination of how architectural material technology and hands-on processes can conserve that energy in more equitable ways. The lab explores manual and digital fabrication opportunities to experiment with earth- and bio-based materials, waste materials, and upcycled streams, to create new high-performing composites, and to expand the lexicon of sustainable and low-energy architectural materials. The new space dedicated to the Natural Materials Laboratory is a joint venture between the staff of the Making Studio and GSAPP faculty, providing students and faculty opportunities to support continued, integrated research.

#### **x. Output Shop**

The Output Shop is a large-scale plotting facility on the 100 level of Avery Hall. It is a full-service print facility exclusively for use by GSAPP students. Expanding the Output Shop has allowed GSAPP students to print larger designs on a greater variety of surfaces with greater speed and efficiency than ever before, features that are crucial during pin-ups, mid-terms, and final reviews.

More information about the Output Shop can be found at: <https://www.arch.columbia.edu/output-shop>.

## **xi. IT Support Facilities**

GSAPP has dedicated IT Support services for students, staff, and faculty. Since the introduction of the first “paperless” design studios on the 700 level of Avery Hall in the mid-90s, there has been substantial annual investment in the facilities and digital infrastructure for research, teaching, presentation, and general computing at GSAPP. A centralized technical and administrative structure has been set up to allow the School to provide a higher level of technical support, standardization of computer hardware and software, and more generous computing resources for all GSAPP students. The result is a wide selection of professional software packages ranging from AutoCAD and GIS to multimedia and video editing, all accessible from any of the 500+ workstations in the School. Moving the Output Shop provided the added benefit of creating space for an IT Satellite on the 600 level of Avery Hall. The IT Satellite is an ideal location for students to access IT support, especially during IT emergencies, as it is centrally located and equidistant to all five studio locations on the upper floors of Avery Hall.

To offer as many learning opportunities to as many students as possible, the School also expanded its information technology strategy to extend far beyond the physical studio and classrooms. GSAPP accomplished this by building a system that allowed remote connections to all 500+ workstations, while still maintaining a secure computing environment via VPNs. The School also supplemented this effort by doubling our pool of available licenses for most of our applications, and established agreements with the various software vendors to include personal student licensing, thus allowing the students to install and run software from their own workstations if they chose to. Finally, GSAPP added cloud-based solutions to extend the physical exchange of designs and ideas by integrating various collaborative software (BIM360, Miro, Panopto, Slack, Canvas, etc.) and storage solutions into our overall information technology infrastructure.

More information on IT Support can be found at: <https://www.arch.columbia.edu/it-support>.

## **xii. Audio Visual Equipment (AV Office)**

Within Avery Hall, rooms 113, 114, 115, and Ware Lounge have built-in projection and computer equipment at a standardized podium. Rooms 504, 505, 408, and 300 Avery have permanently-mounted projectors as do 200 and 300 Buell. The AV Office maintains a large volume of digital equipment available for loan to students, including twenty projectors, eleven laptop computers, eight digital still cameras, thirteen standard DV video cameras, one HD video camera, and one broadcast quality DV camera. In addition, GSAPP maintains a complement of digital audio recording devices (a portable DAT recorder, a personal voice recorder, and a professional digital portable recorder) and slide projectors, and the School’s main auditorium is equipped with three cameras and multiple microphone inputs which allows us to record all the lecture events that take place in this space.

The School also has livestreaming capabilities and have increasingly done lectures and graduation ceremonies via this new global and real-time channel. GSAPP simulcasts events (video and sound) from our large auditorium to three other classrooms, as well as to the cafe area outside of the main auditorium. While the main auditorium can seat approximately 300 people, the School is able to more than double its audience size via its simulcasting capabilities. With the addition of livestreaming, GSAPP has been accommodating a nearly unlimited audience. It has also participated as a simulcast site for events taking place at other locations around New York City by using video conferencing/simulcast technology (broadcasting the video and sound from an event at another site to an audience located in our main auditorium and vice versa).

The School has many professional quality LCD screens, which are mounted throughout the school showing exhibitions, student work, live broadcasts of lectures, and other projects.

More information on the AV Office can be found at: <https://www.arch.columbia.edu/audio-video-office>.

## **B. Renovations 2014-2020**

### **i. Improvements and Upgrades**

GSAPP and its faculty share the desire to remain on the Morningside Heights Campus and keep up the strong connection with the School's history within the walls of Avery Hall and its world-renowned library. Thus, since the last accreditation, GSAPP has greatly invested in improving its existing spaces. In 2013, it established a faculty task force to identify the key parameters for state-of-the-art architecture studios including: collaboration space, individual workstations, computer workstations (desk computers vs. laptop computers), model making and storage areas, and AV integration for presenting work to critics. Beyond simply renovating the studios, the task force was charged with imagining how the school could better support evolving pedagogies and student work flows for the future.

The recommendations from the working group resulted in the first iteration of student workstations, which was executed in the second-year M.Arch studio during the summer of 2013. Faculty and student feedback informed the next studio renovation and, in the summer of 2014, the first-year M.Arch studio was completed. Continuing this feedback loop, the combined third-year M.Arch and Ms.AAD studios were renovated during the summer of 2015. These renovations included additional design changes, which allowed for more storage as well as more flexibility in the use of desk spaces and technology. Each studio renovation undertaken at GSAPP identified specific programmatic needs through continuous feedback from faculty and students. This iterative renovation process has produced a range of designs across the many studios at GSAPP and has contributed to a shared sense of the studio as a space of experimentation and constant evolution.

Creative design solutions were also implemented to re-invent, restore, and renovate central gathering and presentation spaces throughout Avery Hall. In 2015, 200 Avery, a 500-square-foot corridor connecting Avery's entrance lobby to the 100-level auditorium, classrooms, and cafe, was renovated to create a gallery that welcomes guests attending GSAPP's public lecturers, symposia, and seminars. Additionally, the 300M Avery Reading Room was created by repurposing a portion of the mezzanine level as a display space for Columbia Books on Architecture and the City and a myriad of GSAPP publications. Populated with chairs and a cafe table, this space has also proven to be a popular informal space within the school. Adjacent to the Reading Room, the 235 square-foot classroom was also renovated physically and outfitted technologically.

Wood Auditorium, the main lecture hall and meeting space for GSAPP, received both a new unified digital audio-visual system and new lighting in 2015. The auditorium, which is approximately 3,200 square feet, now provides more consistent functionality and improved output quality—providing a better environment to host events, lectures, and classes. Outside Wood Auditorium, GSAPP Cafe, the 2,600 square-foot space serving as display hall and cafe, was upgraded with new GSAPP-fabricated tables and chairs to provide an upbeat gathering space for the GSAPP community.

In 2016, Avery's fourth-floor hallway was restored to reveal more of the original 1910 McKim, Mead & White building. 400 Avery now functions as a 1,400 square-foot gallery space, a reception area, a gathering place for the classrooms and administrative offices that flank it, a site for pop-up exhibitions and reviews, and a post-lecture dining room and special event space. The classrooms on the 400 level—408, 409, and 412—were also refreshed to ensure a cohesive aesthetic; and Ware Lounge, the school's

principal classroom, was upgraded with a new unified digital audio-visual system, ceiling-soffit dual projectors, and state-of-the-art recording capabilities.

In 2017, work on the fourth floor continued with the renovation of the Ms.HP and Ms.UP office suites located in 413 Avery. In addition, the 115 Avery classroom, a 625 square-foot space, was upgraded to a versatile and reorganized well-lit seminar, classroom, and presentation space. The School also completed the major renovation of 100 Schermerhorn Extension that included the repurposing of the existing architecture studio and auxiliary model-making space to create the new state-of-the-art Making Studio. The 3,300-square-foot facility now combines fabrication, 3D printing, robotics, and multi-modal making, rapid prototyping, and digital cutting and tooling into a single resource. The Making Studio was the result of long-standing meetings with students and faculty over three years and continues to evolve as student feedback is incorporated into its daily operations.

That same year, the Arthur Ross Architecture Gallery underwent an extensive renovation that has led to the replacement of all its floors, walls and ceilings, the installation of a museum quality LED lighting system, updated electrical and digital services. The renovation has also expanded the area of the gallery, allowing shows to extend to the adjacent front lobby and South Gallery of Buell Hall, and has connected these spaces with new glass entrances. The sum impact of the renovation has been a more functional gallery and more visibility for the gallery to the GSAPP community, to the University, and to the city, marking its importance among architectural research galleries and experimental architectural installation venues.

In the summer and fall of 2018, an ambitious renovation of the entire 200 level of Fayerweather Hall was completed in close collaboration with the Ms.AUD and Ms.UP Program Directors, as the studios for both programs are integral to the space. Approximately 4,000 square feet of space was renovated, including rooms 202, 203, 204, 206, and 207, and rooms 321, 323, and 324 on the third-floor mezzanine level. The new Ms.AUD studio includes a collaborative workspace, model storage, a dedicated computer for each student, printing facilities, and AV presentation infrastructure. By moving the Ms.AUD studio into Fayerweather, GSAPP leveraged its existing footprint to increase the average amount of space for students in both Ms.AUD and M.Arch programs by 28%. The Ms.UP studio renovation includes a computer lab, a classroom, and a student lounge designed to encourage collaborative work. The renovation also includes the first newly-designed gender-inclusive bathroom on campus.

## **ii. Hybrid Pedagogy Spaces**

Since the onset of the COVID-19 pandemic, the School has worked proactively to add virtual rooms and studios to support its hybrid pedagogy and maintain a sense of community among students, faculty, and staff. There are currently a total of 32 Virtual Studios open to students and faculty 24/7, mimicking an open studio, classroom, or study hall environment. These virtual spaces are supported by a range of online resources, tools, software, and equipment to facilitate teaching and ensure learning outcomes for students.

The School also invested heavily in upgrading all AV equipment in studio, auditorium, and classroom spaces to facilitate both remote and in-person learning and maintain learning outcomes. The goal was to include as many students and faculty as possible while also making the GSAPP communities' health and safety paramount. The School integrated all its auditoriums/large classrooms, and all GSAPP studio spaces, into a global network of hybrid physical/virtual pedagogy spaces to extend communication and pedagogy far beyond the constraints of physical rooms. The School added 19 mobile audio-visual stations that provided video conferencing capabilities and were equipped with high-definition monitors and Poly X-series studio conferencing camera/mic/speaker systems. These mobile AV stations were designed to connect 50% of the entire studio room, and each studio contains two of the AV mobile

stations, together connecting 100% of the students in the room. This system has played an integral role in our efforts to allow GSAPP studio sessions to remain interactive and accessible via a physical/remote hybrid environment.

A comprehensive list of resources for GSAPP's hybrid pedagogy can be found at:  
<https://www.arch.columbia.edu/hybrid-pedagogy>.

### **C. Future Renovations and Needs**

Moving forward, continued upgrades to GSAPP's facilities will require a more formalized masterplan to attract significant external support from donors. Such a masterplan was commissioned from the New York based architectural firm ARO in Spring 2019. The plan identified key priorities for support that included the School's two main auditorium spaces: Wood Auditorium (capacity 265) and Avery Room 114 (capacity 90). Situated on the 100 level of Avery, these spaces host over fifty public events annually, lectures for the Ms.RED program (whose enrollment has outgrown traditional classrooms), and school-wide events and programming such as Open House and Orientation.

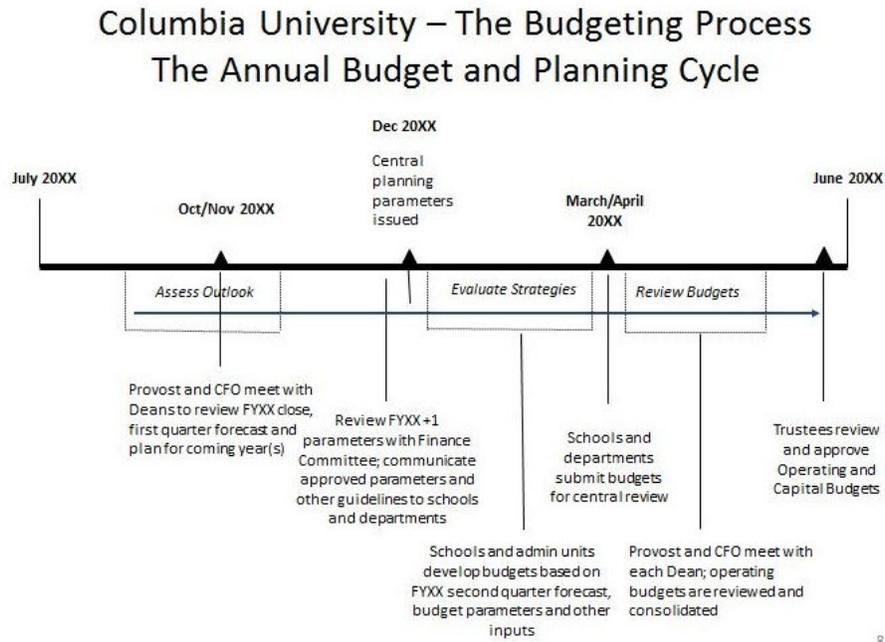
In addition, the GSAPP Cafe, also located in the 100 level of Avery, is a central gathering place for GSAPP students and faculty across all programs and serves as a university hub for neighboring schools. As one of GSAPP's most prominent social spaces, with casual dining options, table seating, and space for informal meetings, the cafe is very much at the heart of the school and should be more representative of a School of architecture and the built environment.

GSAPP needs additional space to maintain its leadership position in the field and is open to working with the University to relocate faculty offices near campus, providing a collaborative and collegial space to build community across the School's diverse faculty. This would in turn allow GSAPP to transform existing faculty offices into much needed classrooms for the school.

### I.2.3 Financial Resources

GSAPP allocates funds to the Master of Architecture (M.Arch) program following Columbia University's Annual Budget and Planning Cycle. The Board of Trustees of the University require that senior management submit the proposed operating budget for the coming academic year for approval at the Trustees' annual meeting in June, and report updates on the actual operating results against budget at regularly scheduled meetings during the year. The Consolidated Operating Budget (COB) is presented to the Trustees for their approval. Per a schedule, determined by the Office of Management and Budget, every vice-president, Dean and Department Chair with responsibility over one or more Departments is required to submit both an Original Budget and a Current Estimate (regular updates during the year).

#### A. Expense and Revenue Categories



The program has influence over expense categories that support:

- Instruction and Educational Administration
- Instruction and faculty support
- Student services
- External affairs and fundraising
- General and financial administration
- Information technology
- Research
- Major Equipment

The Program has influence over the below listed revenue categories:

- Government grants and contracts
- Private gifts, grants, and contracts

GSAPP has maintained financial stability while continuing to advance its stated priorities. There are no significant planned reductions/increases to Architecture enrollment, funding, or funding models.

## **B. Faculty Grants**

Since the 2014–2015 academic year approximately \$1.4 million in individual research grants have been awarded to full time faculty, with 56% of awards going to M.Arch faculty with individual annual awards ranging from \$10k to \$20k.. During this same period, the School has also supported faculty participation in Biennales and Exhibitions for a total of \$281k with individual awards ranging from \$10k to \$25k per award—approximately 64% of these funds were given to M.Arch faculty.

Since 2015 GSAPP has submitted 32 research proposals totaling \$8.7 million. These submissions have yielded successful grant awards totaling \$6.4 million of which 49% were awarded to M.Arch faculty. Amongst the successful proposals: Professor Laura Kurgan received funding from the Andrew W. Mellon Foundation to establish the Center for Spatial Research (CSR) dedicated to interdisciplinary urban research (2015). Professor Kate Orff received a grant from Rockefeller Philanthropy Advisors to establish the Center for Resilient Cities and Landscapes (CRCL), whose core mission is to help communities thrive in an age of climate uncertainty (2018). Professor Richard Plunz received a grant from the Landscape Architecture Foundation to produce case study briefs for LAF's Landscape Performance Series (2017). Assistant Professor Hiba Bou Akar was awarded a Ford Foundation grant for the proposal entitled "Urban Research and Practice in Post-Conflict Settings in the Middle East and North Africa Region (MENA)" that examines the implications of post-war planning interventions on disadvantaged communities and draws key lessons on how to change planning practices to be inclusive of diverse communities (2018).

Since 2015 external research funding has supported 21 researchers (full time and part time), 50 student research assistants (appointed and hourly), 29 faculty members (full time and part time) and 13 administrative officers. Additionally, GSAPP has provided unrestricted funds to support 44 researchers (full time and part time) and 27 student research assistants (appointed and hourly).

## **C. Student Scholarships**

### **i. Fellowships and Funds**

In 2017, GSAPP launched the most ambitious Fundraising Campaign in its history with a goal of \$35 million, and with a commitment to support, empower, and launch the next generation of designers, thinkers, and planners. Fundamental to the campaign has been a commitment to raising funds for financial aid, and since its launch the School has raised \$4.8 million for this effort. Moreover, beginning in 2019, all new gifts made in support of endowed Financial Aid have been matched by GSAPP dollar for dollar. The challenge will match up to \$2,000,000 for gifts made in support of endowed Financial Aid through December 31, 2021. It is with this challenge that GSAPP hopes to continue the School's legacy of breaking down barriers and creating new pathways of knowledge and practice for generations to come.

GSAPP is also committed to supporting a diverse student body. GSAPP offers financial aid to support the most highly qualified applicants, and has established scholarships to actively promote

diversity, inclusion, and equity by breaking down barriers to access for graduate study. To this end, GSAPP committed \$1 million to create the new Norma Merrick Sklarek '50 BArch Scholars Fund in 2020 to support the recruitment of historically underrepresented groups at GSAPP through full-tuition scholarships. The scholarship is named in honor of GSAPP alumna Norma Merrick Sklarek, who was the first Black woman to become a registered architect in the State of New York in 1954, and the first Black woman to receive a fellowship by the American Institute of Architects in 1980. Additional scholarships for historically underrepresented students within the School include the Milton & Yvonne Edelin Scholarship Fund, endowed by Milton Edelin '57 M.Arch with the largest gift from a Black alumnus in the School's history, and the George and Nancy Rupp Fellowship Fund, named in honor of the former Columbia University President recognized for his commitment to forging stronger relationships with local New York neighborhoods.

As a result of these efforts and financial commitments, GSAPP has been able to increase both the number of M.Arch students receiving scholarships, as well as the average amount offered. As of 2020, GSAPP has been able to increase the top scholarship award for M.Arch students to cover full tuition for the duration of their studies, greatly improving the School's ability to recruit the most competitive students. The average scholarship award has increased from \$18,000 in 2017 to a projected \$27,362 for 2021.

Donor-funded financial aid awards have been steadily increasing and this support has contributed to the school's financial aid strategic plan, and its ability to assist international students who may not be eligible for traditional financial aid awards. GSAPP's current financial aid policies and funds are supported in part through generous gifts, such as the Palmisano Family Endowed Scholarship, the Smith and Thompson Endowed Scholarship Fund, and the Carol Loewenson Endowed Scholarship. Restricted annual funds such as the Maha Kutay Scholarship, with a preference for a student from the Middle East, the Dakis Joannou Scholarship, with a preference for a student from Greece or Cypress, and the Bilgili Scholarship Fund, with a preference for a student from Turkey, support the Dean's interest in maintaining a global and socio-economic diverse student body.

In addition to offering merit-based, tuition-relieving scholarships, the School is committed to supporting students' financial needs through additional non-tuition financial aid. A \$300,000 Emergency Fund was first established in 2020 to address students' unexpected financial hardships resulting from the impact of the COVID-19 pandemic. Beyond COVID-19, the School will maintain this form of support through the GSAPP Emergency Fund to assist students with a variety of emergency needs moving forward.

A list of Student Scholarships and Fellowships can be found in Section 4 of this report: Supplemental Material.

More information on GSAPP Financial Aid can be found at:  
<https://www.arch.columbia.edu/admissions/tuition-aid>.

More information on the GSAPP Emergency Fund can be found at:  
<https://www.arch.columbia.edu/covid-19-emergency-fund>.

## **ii. Awards and Prizes**

GSAPP awards a number of prizes at its Commencement Ceremony each year as a way to recognize achievement. Prizes are awarded on a school-wide basis, across certain programs, and specifically within each program. Students across all programs are eligible for four school-wide prizes: the Ali Jawad Malik

Memorial History and Theory Honor Award, the GSAPP Writing Prize, the Visualization Award, and the William Kinne Fellows Traveling Prizes. With the exception of awards nominated by students enrolled in the M.Arch, Ms.UP, and Ms.HP programs, all prizes are merit-based, selected by faculty committee, and have final approval from the Dean's Office.

The most prominent awards are funded through gifts, including: the Charles McKim Prize for Excellence in Design, funded by Saul Kaplan '57 M.Arch; William Kinne Fellows Traveling Prizes; Percival & Naomi Goodman Prize, funded by Raymond Lifchez '57 M.Arch; the Onera Prize for Historic Preservation; the Hank Bell Entrepreneurial Award; and the Ali Jawad Malik Memorial Prize.

A list of Student Prizes and Awards can be found in Section 4 of this report and at:

<https://www.arch.columbia.edu/student-awards>.

### **iii. Incubator Prize for Recent Graduates**

The GSAPP Incubator was founded to provide recent graduates with a collaborative environment to explore new ideas and projects at the intersection of culture, technology and the city. Located in the heart of the downtown creative scene at 231 Bowery from 2014 until 2019, the GSAPP Incubator was an anchor tenant of NEW INC., the first museum-led cultural incubator for art, technology, and design founded by the New Museum.

Blending a professional setting and a culture of entrepreneurship with the communal creative energy and rigorous discourse experienced by students during their time at GSAPP, the program expands the territory between academia and the profession, and allows members to share experiences and skills while building their professional networks and connecting to critical issues in New York and beyond. A unique university-led initiative, the GSAPP Incubator spanned multiple disciplines and draws on the strengths of the school, its faculty, the resources of the New Museum and NEW INC, and the proximity to Lower Manhattan's technology industry.

In 2019, the GSAPP Incubator transitioned from its tenancy at NEW INC to a generous Incubator Prize award of \$10,000. With the same mission to help the development of innovative alumni-led projects, the award continues to advance domestic and international projects dedicated to critical modes of practice that engage the challenges and opportunities facing the built environment today. Over sixty alumni-led projects have participated in the Incubator since its inception. In 2020, GSAPP announced a commitment of \$250,000 to support the Incubator Prize program for 2020 and 2021, enabling the School to double the number of prizes awarded annually and specifically support recent graduates entering the profession during this uncertain time. In 2020, over one hundred alumni applied, and sixteen prizes were awarded.

More information about the GSAPP Incubator Prize can be found at:

<https://www.arch.columbia.edu/research/gsap-incubator>.

### **iv. Teaching and Research Assistantships**

GSAPP offers a variety of teaching and research assistantships each semester as a way to provide greater financial support for students and augment their academic experiences through leadership and research. In fact, the breadth of assistantships at GSAPP has become a defining feature of the School. The School offers over 150 positions, with tuition and salary awards ranging from \$10,464 to \$19,680 per semester. Students are selected for positions based on skill and experience—and those who

demonstrate exceptional ability and achievement in their application for admission are offered teaching assistantships in their merit-based financial aid package upon admittance.

More information on Teaching Assistantships can be found at:

<https://www.arch.columbia.edu/assistantships>.

#### **D. Institutional Development Campaigns**

A description of current development campaigns that include designations for the program can be found in the Section 4: Supplemental Material. More information about current campaigns can be found on the GSAPP website at: <https://www.arch.columbia.edu/campaign>

##### **i. Campaign: Design Create Engage**

In partnership with the launch of the University-wide campaign, GSAPP has created its own five-year \$35 million campaign under the tagline “Design Create Engage.” Within this campaign, the Dean outlined a vision for GSAPP and highlighted opportunities for support relating to the core excellence of the school, namely endowed financial aid, endowed funds for student travel, and endowed professorship funds. The campaign also celebrates and supports GSAPP faculty research, with a deep focus on the priorities of Climate, Equity, and Data and Design.

Following a reorganization of its staff at the launch of the campaign, the Development Office is currently arranged by function (alumni relations, annual fund, major gifts) and serves all programs at the School. The office works closely with faculty to prepare grant applications and administer restricted gifts, and regularly partners with faculty from across programs for events and major donor solicitations. The office also works closely with the University Office of Alumni & Development (OAD).

##### **ii. Campaign Growth Forecast**

GSAPP’s \$35 million five-year campaign goal is the most ambitious in the School’s history. To meet the campaign goal, the School has primarily focused on engaging alumni and families, many of whom have never been approached for major gifts, and continuing key relationships with the Andrew W. Mellon Foundation, Ford Foundation, and IDC Foundation, among other institutional funders. To date, GSAPP has raised \$23.2 million, including \$4.8 million for financial aid; \$6 million in endowment for faculty positions; \$4.4 million in support of the student experience; and \$7.6 million for academic research.

The current GSAPP campaign goals include higher alumni participation, both in terms of donor contributions and engagement with the school, and a stronger emphasis on endowment building. Following peer graduate schools, GSAPP has for the first time created organized opportunities to identify and engage the families of current students with the means to donate generously. Importantly, the Dean has also established the first high-level alumni council to assist with fundraising, the Dean’s Campaign Council. Now with six members, each alumnus must make a commitment of \$100,000 or more to the campaign, attend two meetings annually, and serve as an ambassador for the school working closely with the Dean and staff to identify and solicit other major donor prospects from within the alumni community.

GSAPP has strongly encouraged supporting the School’s endowment to its major donors, and added \$10.2 million to the endowment during the campaign. Endowment support not only serves to strengthen the fiscal health of the School, but also provides engagement and stewardship opportunities for the donor in perpetuity. Our hope is that this consistent connection with GSAPP will yield continuing support in future years far beyond this campaign. To further this effort, and to support GSAPP’s strategic

plan for enrollment, the Dean launched the Core Excellence Matching Challenge, which provides one-to-one matching funds up to \$2 million for new gifts of \$100,000 or more to endowed financial aid. GSAPP anticipates reaching this goal of \$2 million in new endowed financial aid funds by the close of the campaign.

In addition, GSAPP hopes to build a strong pipeline of support to benefit the School by enhancing its planned giving program, such as securing the documentation of a donor's intention to include GSAPP in their estate planning. While many schools on campus have benefited enormously from planned gifts in recent years, GSAPP has prioritized this less. That said, planned gifts have made certain influential GSAPP programs possible, such as the Temple Hoyne Buell Center for the Study of American Architecture and the William Kinne Fellows Fund, which have made an indelible impact on the School. GSAPP hopes to build and secure such possibilities for its future during this campaign. This effort particularly involves alumni, such as those from the M.Arch program, who may be able to make major gifts after their lifetimes. These alumni often have a stronger emotional tie to the school since they are enrolled for more than one academic year. Within the current campaign, \$5.2 million in commitments has been made through estate planning.

The emphasis on planned giving as well as GSAPP's effort to provide more opportunities for giving between \$100,000–\$250,000 has enabled a more diverse pool of alumni to participate in the campaign. Together, these efforts offer a more comprehensive approach to fundraising, which will serve GSAPP in its current campaign but also seed the framework of a more robust major gift program in the future.

#### **I.2.4 Information Resources:**

##### **A. Avery Architectural and Fine Arts Library**

Founded in 1890, Avery Library is the world's leading architectural reference library. While Avery's primary constituency are the scholars and students in GSAPP as well as the Department of Art History and Archaeology, scholars worldwide rank Avery as *the* outstanding international research center on the history of architecture. Avery Library is one of the distinctive collections within the Columbia University Libraries (CUL) administrative unit, which itself is perennially ranked among the top research institutions nationally. With the extension of scholarly interests into increasingly interdisciplinary areas of inquiry, GSAPP's close integration with the Columbia libraries system provides seamless access to collections and services across all disciplines in support of the academic needs of our community.

Avery Library's world-renowned collections are exceptional in both numbers and depth. The collections comprise more than 585,000 volumes on architecture, art, and related fields of study including the library's extensive collection of more than 40,000 rare books. Avery Library also owns an estimated 1.5 million architectural drawings, prints, photographs, and other original architecture-related items. It also maintains a large current and retrospective periodicals collection; this collection is essential to the production and publication of the Avery Index to Architectural Periodicals, the most comprehensive periodicals index in the field. At the time of the last NAAB Accreditation review, Avery Library's holdings of nearly 30,000 architecture-related e-books has increased exponentially as this electronic form of material becomes more and more standard in the discipline and beyond.

All students, faculty, and staff have access to Avery Library architecture librarians and visual resource professionals who provide information services that teach and develop the research, evaluative, and critical thinking skills necessary for professional practice and lifelong learning. Avery Library is staffed by approximately twenty-five full-time employees and twenty-five part-time workers (including contracted workers, interns, and students). Library administration is led by Hannah Bennett (Director) together with a

senior leadership team comprised of six department heads: Access Services, Avery Index Editor, Senior Bibliographer, Curators of Avery Classics, Drawings and Archives, and Art Properties. The professional staff is comprised of ALA-credentialed librarians, technical experts, and disciplinary scholars. All departments also employ well-trained and effective support staff. CUL makes every effort to provide salaries commensurate with experience as well as opportunities for professional development. Revenues from the Avery Index and multiyear grant awards support supplemental staffing. The Avery Director convenes the Joint Faculty Committee on Avery Library whose members advise on matters related to library policies and services.

More information on Avery Library's collections and history can be found at:  
<https://library.columbia.edu/libraries/avery/about.html>.

More information on Avery Library's current staff can be found at:  
<https://library.columbia.edu/libraries/avery/staff.html>.

### **i. User Privileges**

All Columbia University undergraduate and graduate students, faculty, and teaching assistants are eligible for semester loan privileges in most libraries. All University libraries are open to valid Columbia ID holders, regardless of discipline or use—with the exceptions of the Law Library and Business Library during midterms and finals and the Rare Book and Manuscript Library (RBML), which is limited to use of RBML materials only. Full-time officers may designate a teaching assistant or research assistant as a deputy borrower as long as the assistant has an official University ID and their own borrowing records. Full-time officers of Columbia University may also obtain library privileges for spouses and domestic partners. University alumni who have earned an undergraduate or graduate degree are eligible for reading privileges. Please consult the Library Information Office (LIO) for specifics. This office is in room 201 Butler Library on the Morningside Columbia Campus, just to the left of the main entrance. LIO staff provide a wide variety of services to faculty, staff, students, and visiting readers, including initial requests for visitor access to the Columbia University Libraries.

More information on user privileges at Avery Library can be found at:  
<https://library.columbia.edu/services/lio/cuaccessgrid.html>.

A comprehensive list of services available to all users of network of Columbia Libraries can be found at:  
<https://library.columbia.edu/services.html>.

### **ii. Avery Library Services (specific to GSAPP students, faculty, and staff)**

Avery Library is primarily a non-circulating collection with approximately 45% of the collection stored in Columbia's offsite storage facility (ReCAP) with delivery to campus Monday–Friday. Every effort is made to provide access to collections for students, faculty, and scholars; GSAPP access services include: course reserves, inter-library loan, and resource sharing cooperatives (e.g. Borrow Direct, SHARES, and MaRLI) which all provide access to circulating materials from partner research libraries. GSAPP assigns individual carrels to PhD students and in-library shelves to masters-level students. Faculty services include circulation of up to twenty-five volumes to their offices; and newly launched electronic document delivery service which provides direct-to-desktop delivery of digital copies of research literature. Research support services include orientation sessions for incoming students, online and in-person reference

service, individual research consultations by appointment, in-class library research instruction, and, newly this year, “personal librarians” assigned to each PhD student. Recent studies have shown that individualized research support at the beginning of and throughout the graduate research process contributes to on-time and successful completion of degree requirements, and alerts students to the wealth of resources available through Avery Library and our partner institutions worldwide.

Avery Library librarians seek every opportunity to collaborate with GSAPP faculty on curricular integration of our collections/services. Faculty in the historic preservation, urban planning, and history and theory programs regularly schedule class sessions in special collections, collaborating with our curators to engage students with primary resource materials. Student assignments are often focused on the use of rare books, architectural drawings and archives presented in these sessions. Direct exposure to the masterworks of architectural history, such as our Piranesi drawings, unrivaled collection of Ser/io manuscripts, archive collections of figures such as Frank Lloyd Wright, Philip Johnson, Greene & Greene, McKim Mead & White, Hugh Ferriss, and the Guastavino Fireproof Company, among many others, as well as every great work in the canon of architectural printed books from the Renaissance to the present; and to our outstanding collection of nineteenth- and twentieth-century American architectural ephemera (trade catalogs, view books, real estate prospectuses) provides our students and scholars with direct and unfettered access to an unparalleled collection of unique materials.

Program-specific, online research guides for students, faculty, and staff can be found at:  
<https://library.columbia.edu/libraries/avery/research-guides.html>.

More information on Avery Library’s online research support can be found at:  
<https://library.columbia.edu/libraries/avery/avery-library-online.html>.

## **B. Digital Library Collections**

The Digital Library Collections (DLC) website is a gateway to digital reproductions and descriptions of photographs, posters, drawings, objects, ephemera, and manuscripts as well as other archival material from Columbia’s rare and special collections. The DLC repository includes more than 523,000 files comprising over 268,000 unique items, a portion of which is restricted to onsite viewing in the libraries. It will continue to grow as more of our earlier digital projects are loaded in, as more of our special collections are digitized and described, and as hybrid and born-digital archival collections are acquired. Digital content in the DLC website comes almost exclusively from Columbia University Libraries’ distinctive collections, namely: Avery Architectural and Fine Arts Library, Burke Library at Union Theological Seminary, and C.V. Starr East Asian Library and Rare Book & Manuscript Library. It is important to note that many collections in the DLC also have separate customized websites where the same content is displayed within a broader or thematic context. Where this is the case, links are provided so that content can be viewed in either context.

Avery Library’s digital collections can be found at: <https://library.columbia.edu/collections/digital-collections.html>.

## **C. Digital Pedagogies**

### **i. GSAPP Skills Tree/Skills Trails**

GSAPP is increasingly committed to connecting students with new, shared bodies of knowledge online. The GSAPP Skill Tree/Skills Trails is an online platform for familiarizing and teaching architectural software tools. As an open resource and teaching aide, it provides introductions to and hosts video tutorials on a wide range of visualization programs and skills—from MetaTool, Python, and Grasshopper to PhotoShop compositing, RH drawing, and 3DS animation basics.

In addition, Geographic Information Systems (GIS) have become an essential tool for understanding the environment. At GSAPP, GIS software has become an invaluable resource for both architects and planners in conceptualizing the built environment, and the School has focused on developing infrastructure and research that explores new possibilities for the uses of GIS. GSAPP's GIS infrastructure includes workshops, classes and a collection of GIS data pertaining to the urban environment.

More information about GSAPP Skills Tree/Skills Trails can be found at:

<https://skilltrails.gsapp.org/#/map>.

More information on GIS resources and tutorials can be found at:

<https://www.arch.columbia.edu/gis/tutorials>.

### **ii. Open-Source Platforms**

Data literacy and data accessibility is becoming more crucial to GSAPP's curriculums as well. The Center for Spatial Research (see below) conducts three courses—"Conflict Urbanism"; "Mapping for Architecture, Urbanism, and the Humanities"; and "Data Visualization for Architecture, Urbanism, and the Humanities"—which employ both free open-source software and online tutorials that are available to the public. For example, "Data Visualization" is taught using p5.js, an open-source JavaScript library developed and maintained by a global community of collaborators. In this course, students are also required to use Git and Github, a free and open-source versioning control software commonly employed by thousands of software developers around the world and specially geared towards working in collaborative projects. "Mapping for Architecture, Urbanism, and the Humanities" teaches students how to use QGIS, the main free and open-source mapping software, as well as Leaflet, the most widely used web mapping JavaScript library.

In addition, researchers at CSR have developed more than twenty mapping and data visualization tutorials, covering topics from how to create 3D site models, how to style interactive web maps, and how to import spatial data into 3D modeling software. These tutorials have been made available to GSAPP students and are also posted on the center's website, making them available to more public audiences as well. Similarly, CSR uses a host of other open-source tools, data, and software on their own research projects, such as Python, Jupyter Notebooks, Tangram, Mapzen, OpenStreetMap, Postgresql, PostGIS, and Processing.

## **D. Centers, Labs, and Initiatives**

Research at GSAPP is vibrant and multi-faceted—moving beyond the individual programs to create new lines of inquiry and new intersections between disciplines and practices as well as between the School,

the campus, and the institutions and cities beyond its walls. As an urban condenser of ideas, GSAPP hosts a set of interlinked research centers, labs, and initiatives, which focus GSAPP's resources, concentrate the investigative and creative momentum of the school, and enable new ways of addressing the key issues confronting the built environment today. Each research trajectory at GSAPP reinforces the importance of thinking relationally across global contexts, the contribution of visualization in shaping our experience of the world, and, finally, the centrality of environmental sustainability and social equity in our imaginations of alternative urban realities. GSAPP's established research activities become valuable information resources for students and faculty to access.

Centers at GSAPP are the most established, long-term and visible research hubs at the school. They contribute significantly to the production of disciplinary knowledge and of real solutions in and outside of GSAPP—both in their active engagement with external research institutions, academic partners, and governmental and non-governmental organizations, and in their support of the school's curricular preoccupations. There are currently four centers at GSAPP: Temple Hoyne Buell Center for the Study of American Architecture, Center for Urban Real Estate, Center for Spatial Research, and Center for Resilient Cities and Landscapes. The Center for Spatial Research and Center for Resilient Cities and Landscapes were both launched in the last three years.

Labs and initiatives at GSAPP provide a context for faculty research and an interface between the school's disciplines. Labs exist as nimble but still long-standing research platforms; Initiatives are project-based, with defined scope, budget, and timeline. Both labs and initiatives constitute crucial exchanges between the research ambitions of the school and its academic opportunities; and both are supported through a combination of GSAPP seed funding and external funding. The school has formalized its fundraising efforts to support the seeding of labs, initiatives, and junior faculty research through the establishment of the Dean's Fund for Engaged Practices. Current labs include: Extraction Lab, DeathLab, Global Africa Lab, Housing Lab, Natural Materials Research Lab, Post Conflict Cities Lab, Urban Community and Health Equity Lab, and Urban Design Lab. Current initiatives include: Hudson Valley Initiative, Embodied Energy, and Collecting Architecture Territories.

More information about Centers, Labs, and Initiatives can be found at:  
<https://www.arch.columbia.edu/research>.

**i. Temple Hoyne Buell Center for the Study of American Architecture**

Columbia University's Temple Hoyne Buell Center for the Study of American Architecture was founded in 1982. Its mission is to advance the interdisciplinary study of American architecture, urbanism, and landscape. A separately endowed entity within GSAPP, it sponsors research projects, workshops, public programs, publications, and awards.

In recent years, the Buell Center has convened issue-oriented conversations around matters of public concern, such as housing, that are addressed to overlapping constituencies including academics, students, professionals, and members of the general public. The Buell Center's research and programming articulate facts and frameworks that modify key assumptions governing the architectural public sphere—that is, the arena in which informed public analysis and debate about architecture and urbanism takes place. Buell Center projects utilize a variety of formats, such as specialized academic conferences, small meetings, larger public events, and publications, depending on the issues and audience at hand. In all cases, they offer a context for the study of American architecture that brings underlying issues to light and enables architecture's various interconnected publics to gain a greater understanding of its cultural significance.

More information about the Buell Center can be found at:  
<https://www.arch.columbia.edu/research/centers/2-buell-center>.

## ii. Center for Resilient Cities and Landscapes

The Center for Resilient Cities and Landscapes (CRCL) uses planning and design to help communities and ecosystems adapt to the pressures of urbanization, inequality, and climate uncertainty. CRCL works with public, nonprofit, and academic partners to deliver practical and forward-thinking technical assistance that advances project implementation through interdisciplinary research, visualization of risk, project design scenarios, and facilitated convenings. CRCL integrates resilience thinking into design education and academic programming, bringing real-world challenges into the classroom to train future design leaders.

Established in 2018, CRCL extends Columbia University's leadership in climate-related work and supports the interdisciplinary collaborations and external partnerships needed to engage the most serious and challenging issues of our time. CRCL is allied with the Earth Institute's Climate Adaptation Initiative and works across disciplines at Columbia by bridging design with science and policy to improve the adaptive capacity of people and places.

More information about the CRCL can be found at:  
<https://www.arch.columbia.edu/research/centers/4-center-for-resilient-cities-and-landscapes>.

## iii. Centre for Spatial Research

The Center for Spatial Research (CSR) was established in 2015 as a hub for urban research that links design, architecture, urbanism, the humanities, and data science. It sponsors research and curricular activities built around new technologies of mapping, data visualization, and data collection and data analysis. CSR focuses on data literacy as well as interrogating the world of "big data," working to open new areas of research and inquiry with advanced design tools to help scholars and students, as well as collaborators and audiences, to understand cities worldwide—past, present, and future.

Projects generally involve collaborations with researchers and advocates across a variety of disciplines and institutions, working with them to communicate information clearly, critically, responsibly, and provocatively. CSR is committed to rigorous and reliable work with data; to harnessing the most powerful techniques of design and visualization; and to a critical reflection on the limits and ideologies of both data and its representation. Based in the disciplines of design, architecture, and urbanism CSRs makes links and brings spatial expertise to humanities as well as the sciences.

More information about the CSR can be found at:  
<https://www.arch.columbia.edu/research/centers/3-center-for-spatial-research>.

## iv. Housing Lab

The Housing Lab was launched in Fall 2019 with support from the IDC Foundation and builds on GSAPP's longstanding expertise in the study of housing. Led by an interdisciplinary student team, the lab aims to encourage the development of new housing models urgently needed to address shifts in demographics, household composition, challenges of climate resilience, affordability, and the widening inequality gap. Using a design-centric approach, the Housing Lab creates meaningful collaborations and

practical opportunities for architects, developers, and planners to advance and promote creative methods and bold interventions for affordable, adaptive, and resilient housing.

As part of its mission, the lab is a locus for testing and demonstrating methods of practice-based scholarship and pedagogy, as well as a point of intersection between GSAPP and the local community, notably with the West Harlem Group Assistance and Chhaya Community Development Corporation. Since its inception, more than twenty-five students have worked in the lab, uniquely enabling architecture students to work alongside peers in urban planning and real estate development. In 2020, the lab was invited to present its work at the Venice Biennale (delayed until May 2021) with faculty advisors Daisy Ames and Adam Frampton. During the current academic year, Professors Lance Freeman and Mario Gooden served as the lab's advisors.

More information about the Housing Lab can be found at:

<https://www.arch.columbia.edu/research/labs/15-housing-lab>.

#### **v. Selected Labs and Initiatives**

The full range of current labs and initiatives are highlighted below:

##### **Global Africa Lab**

Through design methods and research aided by new technologies and media, this lab explores the spatial topologies of the African continent and its diaspora. More information can be found at:

<https://www.arch.columbia.edu/research/labs/1-global-africa-lab>.

##### **Natural Materials Research Group**

The Natural Materials Research Group promotes equitable design using natural, low-carbon, and nontoxic building materials. More information can be found at:

<https://www.arch.columbia.edu/research/labs/17-natural-materials-research-group>.

##### **Post Conflict Cities Lab**

A lab that develops, through research, practice, and pedagogy, alternatives to current post-conflict planning and reconstruction projects. More information can be found at:

<https://www.arch.columbia.edu/research/labs/16-post-conflict-cities-lab>.

##### **Urban Community and Health Equity Lab**

A lab that conducts interdisciplinary research to transform institutions, policies, and practices that cause health inequities, both domestically and internationally. More information can be found at:

<https://www.arch.columbia.edu/research/labs/14-urban-community-and-health-equity-lab>.

##### **Urban Design Lab**

A research unit in collaboration with Columbia University's Earth Institute that addresses the need for a design-based approach to shaping the long-range future of sustainable urbanism. More can be found at:

<https://www.arch.columbia.edu/research/labs/10-urban-design-lab>.

#### Hudson Valley Initiative

An initiative that serves to gather and synthesize research on the urban design, landscape, preservation, and planning issues facing the region with the aim of generating a holistic understanding of shared questions and opportunities. More information can be found at:

<https://www.arch.columbia.edu/research/initiatives/7-hudson-valley-initiative>.

#### Embodied Energy

An initiative that aims to uncover key questions, issues, and opportunities for architectural design in the context of embodied energy. More information can be found at:

<https://www.arch.columbia.edu/research/initiatives/5-embodied-energy>.

More information and a comprehensive list of Labs and Initiatives can be found at:

<https://www.arch.columbia.edu/research/labs>

<https://www.arch.columbia.edu/research/initiatives>

### **vi. GSAPP Incubator**

The GSAPP Incubator was founded by Dean Amale Andraos to provide recent graduates with a collaborative environment to explore new ideas and projects at the intersection of culture, technology, and the city. Located in the heart of the downtown creative scene at 231 Bowery from 2014 until 2019, the GSAPP Incubator was an anchor tenant of NEW INC., the first museum-led cultural incubator for art, technology, and design founded by the New Museum.

Blending a professional setting and a culture of entrepreneurship with the communal creative energy and rigorous discourse experienced by students during their time at GSAPP, the program expands the territory between academia and the profession, and allows members to share experiences and skills while building their professional networks and connecting to critical issues in New York and beyond. A unique University-led initiative, the GSAPP Incubator spanned multiple disciplines and draws on the strengths of the school, its faculty, the resources of the New Museum and NEW INC, and the proximity to Lower Manhattan's technology industry.

Directed by Associate Professor David Benjamin, the co-working space encouraged discovery and open exchange among a diverse group of participants who are engaging in topics and interdisciplinary methods that expand the possibilities of architecture. During the first four years, member groups developed a variety of cutting-edge projects involving virtual reality and digital technology, critical discourse and publishing, civic issues and public spaces, urban regeneration, emergency response, and more.

GSAPP is currently seeking to consolidate partnerships and support for its GSAPP Incubator, which, in many ways, has been an experiment in advancing nascent research ideas and proposals into viable and sustained practices. In 2019, the GSAPP Incubator transitioned from its tenancy at NEW INC to a generous award of \$10,000. With the same mission to help the development of innovative alumni-led projects, the award continues to advance domestic and international projects dedicated to critical modes of practice that engage the challenges and opportunities facing the built environment today. Over sixty alumni-led projects have participated in the Incubator since its inception. In 2020, GSAPP announced a commitment of \$250,000 to support the Incubator Prize program for 2020 and 2021, enabling the School to double the number of prizes awarded annually and specifically to support recent graduates entering the profession during this uncertain time. In 2020, over one hundred alumni applied, and sixteen prizes were awarded.

More information about the GSAPP Incubator can be found at:  
<https://www.arch.columbia.edu/research/gsap-incubator>.

## D. Publications

### i. Columbia Books on the City (CBAC)

GSAPP aims to expand the ground of architectural discourse through its publishing imprint Columbia Books on Architecture and the City (distributed by Columbia University Press); its online journal of critical essays, the *Avery Review* ([www.averyreview.com](http://www.averyreview.com)); and its email-based experiment in architectural writing, *Avery Shorts* ([www.averyshorts.com](http://www.averyshorts.com)). These three platforms bring together designers, scholars, theorists, and practitioners often working outside the expected formats of their fields to ask urgent questions about what architecture is and what it does—and to model different forms of architectural production beyond building. Echoing the School's commitment to push design pedagogy to address the social, political, ecological urgencies of our world, GSAPP's publication office aims to generate new texts, materials, and sources for exploring architecture's intersections; for rethinking the assumptions and epistemologies of practice; and for confronting the discipline's blind spots and complicity in enduring forms of injustice.

Over the years, Columbia Books on Architecture and the City has published books that remain fundamental to syllabi and conversations within and outside the School. Selected books include *Climates: Architecture and the Planetary Imaginary* (edited by the Avery Review); *Embodied Energy and Design* (edited by David Benjamin); *Ways of Knowing Cities* (edited by Laura Kurgan and Dare Brawley); *Superpowers of Scale* (by Andrés Jaque); *Dark Space* (by Mario Gooden); *The Arab City: Architecture and Representation* (edited by Amale Andraos and Nora Akawi); *Preservation and Social Inclusion* (edited by Erica Avrami); and *Paths to Prison: On the Architectures of Carcerality* (edited by Isabelle Kirkham-Lewitt). The pedagogical function of the imprint is perhaps best encapsulated in its smallest, most ephemeral print project "Footnotes on...", which organizes and annotates citations around especially pressing topics for the field. To date, the office has published "Footnotes on Climate" and "Footnotes on Housing," and is currently compiling "Footnotes on Carcerality."

Recent and forthcoming publications chart an even wider disciplinary terrain spanning the origins of environmental design (*Proxemics and the Architecture of Social Interaction* by Larry Busbea); abolitionist and post-colonial futures (*Nights of the Dispossessed: Riots Unbound*, edited by Natasha Ginwala, Gal Kim, and Niloufar Tajeri, and *Space Settlements* by Fred Scharmen); unexpected methods of visuality (*Signal. Image. Architecture.* by John May, and *Modern Management Methods* by Caitlin Blachfield and Farzin Lotfi-Jam); alternative research practice (*Empire Remains Shop* edited by Cooking Sections); and the philosophical and real crises of housing (*Unhoused: Adorno and the Problem of Dwelling* by Matt Waggoner, and *A House Is Not Just a House* with Tatiana Bilbao, Gabriela Etchegaray, Hilary Sample, and Ivonne Santoyo-Orozco).

The publication office's simultaneous embeddedness within and publishing autonomy from GSAPP is what makes it such a successful model of intervention in the field. Approximately a third of Columbia Books on Architecture and the City's books stem from GSAPP-sponsored initiatives and faculty research projects. Yet the imprint is also, crucially, a platform committed to amplifying voices outside of the School—especially those contributing to the collective rewriting of a discipline that has long kept difference at its margins. This is especially true with the *Avery Review* and the office's digital platforms, which offer the space, visibility, and support of a major institution to architectural writers, thinkers, and students working beyond it. The journal's pedagogical function is, perhaps, best represented by its annual Essay Prize, dedicated to celebrating the thinking and writing of emerging essayists, current students,

and recent graduates. The *Avery Review* in turn archives, reflects, and takes stock of the myriad positions, institutions, and implications of architecture in its broadest sense. Like “Footnotes on...”, the *Avery Review*’s “Topics” page offers a way for readers to reengage and download a breadth of previously published writing through various lenses: the right to housing, climates of extraction, institutions of architecture, embodiments, territories and ecologies, control systems, building access, and architecture and the nation. Whether online or in print, the office aims to provoke new ways of thinking about architecture—publishing texts, essays, and books that challenge what one considers “architectural” and offering the space to test that thinking out through writing.

Publishing is an inherently public-facing feature of academia, and the School’s publications and events offices frequently collaborate to maintain an active calendar of book launches, events, and art and architecture book fairs. These include three or four events or conferences annually to help set new directions for publication work, alongside twelve to fifteen book launches presenting the final outcomes. Directed by Isabelle Kirkham-Lewitt the Office of Publications is committed to working with local organizations in order to reach a wider readership, which in the last year included New York institutions like the AIA Center for Architecture, the New Museum, Storefront for Art and Architecture, the design incubator A/D/O in Brooklyn, Light Industry, Book Culture, and others.

An archive of all GSAPP publications can be found at: <https://www.arch.columbia.edu/books>.

## ii. Student Publications

The School’s Office of Publications, which runs Columbia Books on Architecture and the City (CBAC), has over the years actively supported various student publishing projects. Some of the published projects include: *Promiscuous Encounters* (2014), documenting a day-long Ms.CCCP event on promiscuous practices in architecture; *Venice Counter-Catalogue* (2015), a record of the Venice Observatory: a month-long, student-led research studio embedded at the edge of the fourteenth Venice Architecture Biennale; and *Experiments in (Radical) Functionalism* (2018), an index of student research conducted in Adjunct Associate Professor Luis E. Carranza’s Fall 2016 and Fall 2017 seminar “(Radical) Functionalism in Latin America.” Further, through the office’s Digital Reader, Ms.AUD students have published six books as part of the *Water Urbanism* series: *Water Urbanism: Rio de Janeiro* (2016), *Water Urbanism: Madurai, India* (2016), *Water Urbanism: Kolkata* (2017), *Water Urbanism: Amman* (2017), *Water Urbanism: Varanasi* (2018), and *Water Urbanism: Aqaba* (2018).

GSAPP students have actively self-organized to create new publications and platforms for working through, reacting to, and testing new ideas about architecture. Current student publications include *URBAN*, a semesterly magazine and forum for discussing the realms of urban planning among GSAPP students, faculty, and alumni; *Vacuum*, an editorial project launched by the Ms.CCCP class of 2018; *The Morning After: The Blind Dates*, an editorial project launched by the Ms.CCCP class of 2019; and *FreePost*, a student-created newspaper featuring stories, essays, comics, and interviews by and for current GSAPP students formed in 2018.

A few student-created platforms have endured beyond their tenure at GSAPP, in part due to the support of and their membership at the GSAPP Incubator. For example, : (pronounced “colon”), founded in 2013, is a publication and platform that interrogates the vocabulary, rhetoric, and boundaries of architecture; *A-Frame* is a platform spearheaded by former GSAPP students that, since 2015, has critically investigated the social, economic, and political issues that frame the fields of architecture and development through workshops, conversations, and events; and QSPACE, founded in 2016, is a queer architectural research organization. These projects have maintained relationships with the School through

special events hosted at the GSAPP Incubator and by participating in portfolio reviews, serving as mentors, and presenting their research and ideas to current students and recent graduates.

### **iii. Abstract**

*Abstract* is an annual print publication of faculty-selected student work from across GSAPP's degree programs: Architecture; Urban Design; Urban Planning; Historic Preservation; Critical, Curatorial, and Conceptual Practices; and Real Estate Development, produced through the Office of the Dean, Amale Andraos. Since its launch in 1988, *Abstract* has served as an indispensable cross-section through the School—registering its evolution by archiving the endlessly diverse production that takes place across it. As a tool, *Abstract* provides a glimpse into GSAPP's particular mix of continuity and change.

The most recent edition, *Abstract 2019*, features 468 images of student work across 502 pages, alongside thesis and dissertation abstracts. The book is divided by program, and features texts by the program and sequence directors who introduce each curriculum. A selection of student-authored texts and a comprehensive directory of course descriptions provide more context for the visual presentation. This presentation of student work in a physical format serves as an extension to the School's digital archive, which features over 9,000 works as of the Spring 2021 semester.

Beyond student work, *Abstract* also features documentation of guest critics at review sessions and commissioned photography of the School or student models, as well as its annual *End of Year Show* exhibition. New sections are introduced each year alongside regular inserts dedicated to the School's public programming, exhibitions, international workshops, research initiatives, publications, alumni initiatives, student life, and more.

More information about the Student Digital Archive can be found at: <https://arch.columbia.edu/student-work>.

More information about *Abstract* can be found at: <https://www.arch.columbia.edu/abstract>.

## **E. Events and Communications**

In support of GSAPP's curricular focus and contributions to a wider discussion on contemporary issues in architecture, the city, and the environment, the School maintains an active events and public program series. These activities reinforce and amplify the intellectual life at the School—fueling the density and diversity of encounters and perspectives at GSAPP and providing opportunities for collaborations at all scales: from interdisciplinary discussions within the School and across Columbia University to external exchanges with partner organizations and peers across New York City, the country, and the globe. These events also enrich the academic experience at GSAPP: exposing students to the ideas and methods of professional and intellectual leaders from a wide range of cultural and geographic backgrounds. GSAPP's public presence is supported through communication tools that expand the reach of its activities and initiatives, contribute original content to attract future students, make visible the work of our faculty, and reinforce the School's international standing.

### **i. Events and Public Programming**

Public programs play an integral role in fulfilling GSAPP's responsibility to host a diverse and lively community marked by unwavering intellectual generosity and a commitment to the exchange of ideas. The School offers a keynote lecture each Monday night and a lunch-time discussion or conference each

Friday throughout the fall and spring semesters. These foundational events are supplemented by additional book launches, screenings, and special events. All events are open to Columbia University students, faculty, and staff, as well as the broader public engaged in architecture and the built environment.

GSAPP's public programs stimulate discussion among faculty and students by critically addressing the conditions of architecture and design practice, and in recent years has focused on developing and sharing expertise on topics that are urgently relevant to the contemporary state of architecture and the built environment. The School is committed to highlighting and amplifying BIPOC voices in its public programming and in classes where guest lecturers are invited. Reflecting the concerted effort to further diversity events during the 2020–2021 academic year, 80% of the Dean's Lectures feature minority speakers, including 45% Black speakers, and more than half of the lectures feature women. Alongside lectures, the School's conferences and events emphasize and explore the intersections of racial equity, social justice, and climate change across the built environment, and provide a platform for underrepresented voices in the disciplines and practices of the built environment. These include events highlighting interdisciplinary contributions by alumni and faculty such as "Beverly L. Greene and Norma Merrick Sklarek: New Research in Black Women's History in Architecture"; "Addressing Systemic Racism in Real Estate"; "Building Collaboration: On The Question of Repair"; and "Planning Futures? On Decolonial, Postcolonial, and Abolitionist Planning."

Events are also an opportunity to engage the School's alumni, whether in dialogue with external guests or among one another. Alumni are regular participants in lectures, conferences, and other events to share their professional practices and experiences, address specific topics of expertise, and establish new connections among the alumni community and with current students and faculty.

A comprehensive list of GSAPP Lectures and Events (including those eligible for AIA Continuing Education Learning Units) can be found in Section 4 of this report: Supplemental Material.

More information on Events at GSAPP can be found at: <https://www.arch.columbia.edu/events>.

## **ii. Communications**

GSAPP's Communications Office was established in the Fall 2015 with the objective of increasing the external visibility of the School's academic strengths, programs, and activities, and serving as an internal resource by collaborating with academic program offices to support the work of their faculty and students. This has resulted in a more unified presentation of the vibrant and diverse life of the School, which in turn has more effectively expressed the overall direction and priorities of the School to its external audiences of prospective students, alumni, and professional and academic peers, but also internally among current students, faculty, and staff. Display monitors in the building and a weekly newsletter for the GSAPP community are tools to regularly share updates and news, feature internal programming highlights and recommended external events, celebrate the accomplishments of students, faculty, and alumni, and provide other timely updates. This regular newsletter has become an especially important communication tool during the 2020–2021 academic year to maintain contact and share resources during hybrid and remote operations.

More information about News from GSAPP can be found at: <https://www.arch.columbia.edu/news>.

### **iii. Website and Social Media**

Launched in April 2016, the GSAPP's redesigned website (<https://www.arch.columbia.edu>) serves as both an editorial platform and an archive. It is the primary tool for sharing faculty or alumni news and achievements, capturing student work and experience, and representing the full breadth of the School's academic, research, and public activities. As an archive, the website currently hosts over 9,000 images of student work, over 3,000 course entries, and several years of event recordings and exhibition documentation. The School's social media presence delivers distinct content on different platforms: student work and experience on Instagram, faculty recognition and publications on Twitter, and alumni news and gatherings on Facebook. The consistency of GSAPP's engagement online has led to significant growth especially on Instagram, where a target audience of prospective, current, and recent students engage with content such as student drawings or models, travel images, and views of final critiques, pin-ups, or exhibitions. A more recent content series also includes the Dean in conversation with faculty to introduce their professional and academic work to current and prospective students. This video interview format has also allowed for the public introduction of new faculty members appointed at the School. The Instagram account is one of the most followed accounts among architecture schools as well as at Columbia University, reaching a wide international audience with strong engagement in the content.

GSAPP's Media Archive can be found at: <https://www.arch.columbia.edu/media-archive/lectures>.

### **iv. Podcasts**

In February 2017, the School launched a weekly podcast series called GSAPP Conversations. Hosted by the Dean, the podcasts feature students in conversation with lecturers, as well as the Dean in conversation with faculty. Each conversation is approximately twenty minutes and provides a concise insight into the guest's work and ideas as they are relevant in the context of the School. Produced internally with the help of Columbia University radio journalism students and distributed by iTunes and SoundCloud, the podcasts form a growing archive of narratives on architecture accessible on the School website's Media Archive. In recent years, the format has developed to include additional series, including "Constructing Practice," a series of short statements by young architects on the founding ideas and ideals of their practice; "UD Sessions," a series featuring Ms.AUD alumni speaking about their work; "Preservation Lecture Series," in which the Ms.HP program director and PhD candidates speak with invited guests; and most recently the "Natural Materials" series hosted by Assistant Professor Lola Ben-Alon.

An archive of all GSAPP Conversations can be found at: <https://www.arch.columbia.edu/media-archive/podcasts>.

## **F. Exhibitions**

GSAPP has a well-established exhibitions program that explores emerging architectural practices, research, and ideas through international historical and contemporary installations at the Arthur Ross Architecture Gallery in Buell Hall and displays student and faculty work in dedicated spaces throughout Avery Hall. The School's exhibitions program is as much of an academic resource as a cultural venue: students work as research, installation design, and fabrication assistants, as well as gallery attendants.

A comprehensive list of GSAPP Exhibitions (2015–2021) can be found in Section 4 of this report: Supplemental Material.

**i. Arthur Ross Architecture Gallery**

Founded in 1990, the Arthur Ross Architecture Gallery is a recognized venue for architectural exhibitions, attracting attention and visitors from around the city and beyond, as well as serving the Columbia University community. The gallery is a space for GSAPP to pursue collaborations with architects and artists, develop historical research, and initiate interdisciplinary programming to provoke and shape new directions in architectural culture and discourse. The gallery's exhibition program is an opportunity to reinforce the School's larger themes of making and visualization, and is a vital venue for new commissions. Recent exhibitions have led to a renewed focus on architectural photography—especially relevant as students learn to document and present their own work—as well as filmmaking and other alternative modes of practice. As the gallery is housed within GSAPP it necessarily emphasizes the creative and deliberate presentation of its material and is able to support young architects through exhibition design.

More information on the Arthur Ross Architecture Gallery, including current and past exhibitions, can be found at: <https://www.arch.columbia.edu/facilities/5-arthur-ross-architecture-gallery>.

**ii. End of Year Show**

A highlight of the GSAPP exhibition program is the annual *End of Year Show*, a celebration of the academic year that showcases the work from GSAPP's student body spanning all degree programs. A three-decade old tradition, this expansive display throughout Avery Hall captures both the School's playful experimentation and disciplinary commitment. Under the leadership of the exhibitions team, it has evolved in recent years to become an inclusive but carefully considered installation that now attracts the attention of outside guests, including students and faculty from other schools and within the professional field, alongside the students' families and friends who are on campus for commencement festivities.

In May 2020, following an unprecedented Spring semester, the exhibition departed from its traditional format of installations throughout the School and was held entirely online for the first time. A new digital platform was created to represent work by each graduating student, and featured nearly 3,000 images and documents. In its new format, the exhibition included drawings and renderings, animations and films, web-based projects, thesis abstracts and development case studies, award-winning design portfolios, and a series of conversations between the first- and second-year students of the Ms.CCCP program.

More information about the *End of Year Show* can be found at: <https://www.arch.columbia.edu/eoys>.

## **I.2.5 Administrative Structure and Governance**

### **A. Administrative Overview**

GSAPP's Master of Architecture (M.Arch) program is directed by the Dean. The Dean works in close collaboration with the Program's Sequence Directors who together oversee the M.Arch curriculum and its pedagogical goals. The M.Arch is designed to be administered through extensive collaboration and exchange with each faculty member responsible for one sector of the M.Arch curriculum but working as part of an organic whole:

*Amale Andraos, Dean and M.Arch Program Director*  
*Hilary Sample, Sequence Director, Core Studios*  
*David Benjamin and Mario Gooden, Sequence Directors, Advanced Studios*  
*Lola Ben-Alon, Sequence Director, Building Science and Technology*  
*Reinhold Martin, Sequence Director, History and Theory*  
*Laura Kurgan, Sequence Director, Visual Studies*  
*Anna Puigjaner, Coordinator, Core Studio I*  
*Ziad Jamaledine, Coordinator, Advanced Studio IV*  
*Paul Segal, Professional Practice Coordinator/AXP Coordinator*

M.Arch Sequence Directors are responsible for curricular offerings, including making recommendations on new adjunct hires to the Dean. Together with the Dean, they are supported by GSAPP's overall administrative staff, led by Janet Reyes (Senior Associate Dean of Administration and Faculty Affairs), Danielle Smoller (Associate Dean of Academic and Student Affairs), Leah Cohen (Associate Dean Development and Alumni Relations), and Steffen Boddeker (Associate Dean of Admissions and Outreach). Other key positions include Benjamin Goldie (Director, IT) and Mark Taylor (Director of Operations). This dedicated group of individuals has been with the School for a considerable time (between 6 and 33 years). The program also has an administrative assistant as well as several work-study students who handle day-to-day needs.

An organization chart and staff list are provided in Section 4 of this report: Supplemental Material.

#### **i. Administrative Restructuring**

Since 2014, GSAPP strengthened the School's administrative backbone by restructuring it and gradually allowing it to meet its operational burdens more effectively.

Academic and student affairs, faculty affairs, human resources, and other administrative responsibilities were redistributed amongst the Associate Deans and their respective offices. In the Dean's Office, an Assistant Director was hired to assist with faculty appointments, a long-standing member of the team was promoted to Assistant Dean of Faculty Affairs, and, leveraging over twenty-five years of university experience, the Associate Dean of Finance was promoted to Senior Associate Dean of Administration and Faculty Affairs. In the Finance Office, an Assistant Director was hired to manage the disbursement of over \$800,000 in travel funds to faculty and administrators and the School's travel program that annually awards \$1.3 million to approximately 600 students to offset the cost of course-related travel to over 30 countries. The Development Office was fortified with the addition of a new Major

Gifts Officer and an Annual Fund Officer. These positions advanced GSAPP's core fundraising efforts to sustain the school's expansive programs.

Following the review of our admissions processes in 2015, a separate Admissions Office was established and aligned with the Communications Office. Worked closely with the Dean, the Program and M.Arch Sequence Directors, and the faculty at large, efforts to shape the School's public profile are closely aligned with admissions and have since been consolidated under the leadership of a newly created position, Associate Dean of Admissions and Outreach, with the clear objective of attracting the most talented students to GSAPP as well as recruiting students from under-represented groups through partnerships and other opportunities to increase applications. A new Director of Admissions and Financial Aid, reporting to the Associate Dean of Admissions and Outreach is responsible for developing and executing enrollment and engagement strategies, collecting and analyzing data to make informed decisions, and maximizing the deployment of available funds, systems, and tools. They work closely with the Dean's Office, the Sequence Directors, and the Associate Dean of Academic and Student Affairs to shape the School's admissions strategy, while increasingly collaborating with the Finance and Development Offices to increase fundraising for financial aid and opportunities for named student fellowships.

With this new structure, the Academic and Student Affairs Office sharpened its focus on strategizing opportunities for new and future programs, on better supporting the range of student experiences at GSAPP, and on encouraging the sustained and positive connection between students and the School post-graduation. The Associate Dean of Academic and Student Affairs is dedicated to promoting and maintaining the academic excellence of the School by supporting GSAPP's Dean and Program Directors as well as faculty with administrative academic and curriculum needs as well as ensuring students' time at the School is inspiring and productive. This restructuring was in accordance with the strong sense of collegiality among the various GSAPP administrative offices, which have become increasingly collaborative in their mutual support and desire to meet the evolving needs of the School, its faculty, and its students.

New hires in the Making Studio and Output Shop have cemented the safe operation of these student centers, increased their technical expertise, and expanded their hours of operation. Responsibilities were clarified and expanded within the Information Technology/Audio Visual department. Top performers were promoted to leadership positions, not only encouraging a sense of ownership but creating a path for professional advancement. A new Exhibitions Director was hired as well as a new Events Director and an Assistant Director was added to provide administrative and logistical support to both the Events and Exhibitions teams, and guarantee consistency in the School's outreach and public programming efforts.

In 2015, Career Services was established, and a new Career Services Officer was hired to assist students in the School's architecture programs with professional development by organizing design portfolio reviews, resume workshops, and annual professional career fairs for students to meet with professionals from traditional forms of practice as well as from adjacent fields such as graphic design, construction, and technical consulting. In January 2021, GSAPP was very delighted to hire an Assistant Director of Career Services, an essential administrative position dedicated to the Architecture program. In this role, Karen Cover works exclusively with GSAPP's Architecture programs to provide 1:1 student counseling, coordinate a breadth of programs to support student transition from the academic to the professional, as well as engage with employers seeking to hire from the GSAPP community. Karen joined Columbia with more than a decade of experience in higher education, including roles in the career offices of NYU Tandon School of Engineering, Pratt Institute, and Palm Beach State College. Karen is certified as a Career Coach and as a Professional Résumé Writer.

In 2021, as part of the GSAPP Anti-Racism Action Plan, a new position has been established and will be dedicated to expanding student support and advancing the School's work in anti-racism and diversity, equity, and inclusion. Reporting to the Associate Dean of Development and Alumni Affairs, the Assistant Dean of Recruitment, Diversity, and Inclusion will lead the development and implementation of strategies to align with the School's DEI Mission and support the implementation of its Anti-Racism Action Plan. This position will be charged with implementing the School's strategic plan for addressing needs of historically underrepresented groups in our disciplines and facilitating community engagement and education on matters of diversity, equity, and inclusion across the fields of the built environment.

## **B. Governance**

### **i. Faculty Governance and Reviews**

The Executive Committee (EC) at GSAPP, which consists of the twenty-one tenured faculty, shapes the overall character of the full-time faculty through faculty review processes, and plays a central role in the mentorship and advising of junior faculty. EC members are designated by the Dean to serve on full-time faculty review committees and make recommendations regarding the termination or continuation of appointments, as well as to advise on the direction and focus of faculty members in subsequent appointments.

Tenure-track faculty are reviewed and discussed by the full EC with an initial analysis performed by a sub-committee of the group. Each review, which is progressively more rigorous, culminates in a vote by the EC to recommend to the Dean that the faculty member either be advanced to the next phase of the appointment and review cycle, or have their appointment terminated. In the first year Confirming Review, one EC member presents to the full Committee an overview of the tenure-track faculty member's practice and/or scholarship and teaching to confirm their ability to continue at GSAPP. In the third year Developmental Review, a sub-committee of three EC members review the dossier of the tenure-track faculty member and present an analysis to the full EC. If the EC vote is positive, it will also make recommendations to strengthen the tenure-track faculty member's focus towards the strongest case for tenure. After a successful Developmental Review, tenure-track faculty are granted one semester of paid leave to focus on their research. The sixth year Critical Review is the most in-depth and comprehensive review of the tenure-track faculty member's practice and/or scholarship, teaching, and service. A sub-committee of three EC members completes a detailed review and drafts a preliminary analysis for EC discussions. After evaluating the faculty member's work, the EC votes to either move forward in requesting outside letters of evaluation or to terminate the candidacy for tenure. The EC reviews the letters and overall case for tenure during the fall of the seventh year and votes on whether to submit the case to the Provost's Tenure Review Advisory Committee (TRAC) with a recommendation for tenure. The Provost determines whether the faculty member should be recommended to the President and Trustees for tenure.

The faculty review committees for PoPP and LiD junior faculty are made up of three EC members that make a recommendation directly to the Dean regarding the continuation of the appointment. If appropriate, the committee will give additional feedback to aid in the continued success of the faculty member. PoPP and LiD junior faculty are reviewed in their first, third, and fifth years of service: the Confirming Review, the Developmental Review, and the Major Review, respectively. The Major Review is the most rigorous and in-depth review for PoPP and LiD junior faculty. The Dean convenes a Major Review Committee that includes three EC members, a Columbia University faculty member, and an outside expert. The committee examines the quality of the faculty member's work and their contribution to advancing the school, and makes a recommendation to the Dean to either terminate or renew the

appointment. Upon passing the Major Review, the faculty member is eligible for a renewal contract of up to five years in length and will undergo another review in the penultimate year of the extended contract. The Dean also appoints EC, full-time, and adjunct faculty members to committees and task forces on other topics as needed, such as curricular development, mentorship, and new academic initiatives.

The current Tenure-Track Review Guidelines, Professional Practice Review Guidelines, and Lecture in Discipline Review Guidelines are provided in Section 4 of this report: Supplemental Material.

## **ii. Student Governance (Program Council)**

Program Council serves as a link between the student body and the administration. Program Council is composed of a group of students from each program, elected by their peers, who act as coordinators and communicators between the students, faculty, and administration. This body is tasked with meeting independently with the entire student body several times a semester and then with the Dean and other members of GSAPP administration. The Program Council is a key component in the student assessment of the overall learning culture at the School but also handles other issues that range from suggestions on curriculum issues to IT needs and facilities issues.

This system has been successful in effecting positive change at GSAPP. For example, in 2015, Program Council requested changes to the M.Arch Visual Studies Sequence. These discussions established greater transparency between faculty and students and put in place a more continuous and coordinated relationship between the Visual Studies Sequence and Design Studio Sequence—with faculty constantly re-evaluating and communicating which exercises and projects were intended to overlap in the two sequences, and which topics were not. Similarly, M.Arch Program Council participated in planning meetings with the Dean and representatives from academic and student affairs, facilities, and fabrication for the new Making Studio to ensure that the space met the needs and desires of those using it in the future. Most recently, the M.Arch Program Council worked with the Dean, the Director of the History and Theory Sequence, as well as with the Dean of Academic and Student Affairs on submitting changes in the History and Theory curriculum to the Provost.

Program Council raised the concern that similar programs at other schools were STEM eligible under CIP Code 04.0902 for a STEM OPT (Optional Practice Training)—a designation that is significant to foreign students who intend to gain experience working in the US following graduation. The curricula were sent to the Provost Office for review and now international M.Arch, Ms.AAD, and Ms.AUD students are eligible to apply to extend and authorize their OPT for an additional twenty-four months after the initial twelve months of OPT to work in the United States.

Other responsibilities of the Council include the administration of the studio lottery system each semester. The Studio Lottery is a system for selecting and assigning students to studio critics. Following presentations made by faculty members on the nature of the projects and objectives of each studio, students are asked to rank studio preferences. Program Council is responsible for administering the studio lottery which yields eight to twelve students per critic, selections which are then reviewed and approved by the Dean and the Academic and Student Affairs Office.

Currently the School is undergoing a review of the student government structure in consultation with a student-led working group with the goal of transforming Program Council into a Student Council where representation is not limited to being program-based but rather is seen as issue- or theme-based—with the capacity for the Student Council to create sub-committees every semester to explore and advise on certain issues at GSAPP. Furthermore, new modes of communication and exchanges with the School's administrative leadership and its faculty are established with a mind towards greater transparency among constituents, and the possibility of greater student impact on the future of the

School. The relationship between this new Student Council and the increasing numbers of student organizations is now being redefined.

Currently, the Office of Academic and Students Affairs meets bi-monthly with Program Council and the student organizations, with the Dean meeting at least twice a semester with each group. In 2020, the School's administrative leadership and student groups collaborated on a new GSAPP student handbook to promote clear guidance for students.

More information about Program Council can be found at: <https://www.arch.columbia.edu/program-council>.

More information about Student Organizations can be found at: <https://www.arch.columbia.edu/student-organizations>.

The Student Organization Handbook can be found at: <https://www.arch.columbia.edu/books/reader/598-columbia-gsapp-student-organization-handbook>.

## **II.1.1 Student Performance Criteria**

### **A. Overview of the Program Curricular Goals**

At GSAPP, architecture is understood as a form of knowledge inextricably linked to a broader context of environmental and global action—one that is oriented not only towards what architecture is but towards what it can become. The Master of Architecture (M.Arch) program, a three-year professional degree, pushes our understanding of architectural experimentation and reinvention forward, as faculty and students weave together critical discourse with technological skill, disciplinary expertise with expanded modes of practice, and design speculation with engagement in the issues of our time. The program finds its strength in the diversity of its faculty and in their multivalent approaches to architecture. Its pedagogy is simultaneously rigorously structured and constantly re-conceived to be able to respond to ever-changing contexts—welcoming and fostering the necessary openness, inquisitiveness, and intellectual generosity that enable and foster new avenues for individual development and collective directions in the field.

The M.Arch program is centered on the Design Studio Sequence and the three curricular sequences that orbit it: History and Theory; Visual Studies; and Building Science and Technology; as well as the required Methods and Practice; and Elective and Optional Studies Sequences. Each sequence consists of core courses that establish a base of knowledge as well as advanced and elective courses that challenge students to extend their thinking and test their assumptions about architecture. While the sequences run in parallel, they are also designed to be brought together at critical junctures: through the intersection of specific exercises as well as through a broader synthesis of knowledge and integration which occurs principally in the Design Studio Sequence. The result is a holistic and comprehensive education that is rigorous and innovative enough to meet the demands and challenges of the profession today.

Prior to graduation, students are required to submit a portfolio of representative work from each semester, which is evaluated by all studio faculty in the context of the awarding of prizes. While the M.Arch does not include a thesis project, students are encouraged to consider their final portfolio as something like a thesis—a synthesis of investigations, research work, and design projects that helps them build their own approaches to their practices. These end-of-year portfolio reviews are a hallmark event at the School and the top portfolios are awarded prizes at GSAPP's annual Commencement Ceremony. With each year, graduation portfolios become the new benchmark for the potential student work of the school.

### **B. Approach to Integrated Architectural Solutions**

The M.Arch program seeks to holistically integrate the Design Studio Sequence with courses in the Building Science and Technology, History and Theory, Visual Studies, and Methods and Practice Sequences. The underlying pedagogy of the School progressively reinforces methods and skills to conduct research, critically evaluate information, and propose integrated solutions. As design projects increase in complexity, students gain the ability to synthesize a wide range of variables into their design proposals.

In the first year, students are introduced to a range of research methodologies: qualitative, quantitative, and critical. In the first design studio, students approach research first as a qualitative exercise and then gradually integrate quantitative data as a source of information. Design studios are carefully calibrated with their respective concurrent courses so that students can draw on knowledge and methods across classes to help inform their decisions. While design and technology courses share

exercises and coordinate requirements for systems integration, courses in the History and Theory, Visual Studies, and Methods and Practice Sequences enrich students' abilities to consider the environmental, social, political, and cultural implications of their designs and hone their argumentative, computational, and representational skills. In the Design Studio Sequence, students are constantly asked to critically evaluate options and reconcile the implications of their design decisions across systems and scales. In this way, building systems are progressively synthesized into increasingly integrated and cohesive architectural proposals.

In the second year, integration comes to the forefront in the Building Science and Technology Sequence. At the building scale, students are required to design a building in BIM software and produce a complete set of construction drawings that detail multiple technical systems. At the urban scale, students propose a master plan and design its first buildings that integrate complex urban systems. In design studios, students take integrative thinking to a higher level, questioning their own approaches to integration as they design for a specific constituency. With the complexity and requirements for integrated solutions gradually increasing across the curriculum, students gain the ability to use design skills to address technical problems, and technical knowledge to address design problems.

In the third year, students choose among eighteen Advanced Studios that together explore new instruments, techniques, and formats of design across a multiplicity of existing realities. All the Advanced Studios are treated as a form of design research, requiring advanced evaluative skills and specific technical knowledge in order to be able to develop projects to a high degree of resolution.

Design integration is set against a backdrop of environmental stewardship. Increasingly, the School is proactively engaging in issues related to climate, sustainability, and the environment across multiple scales both spatial and temporal. Throughout the curriculum, GSAPP challenges students to ask questions in relation to climate. Should climate change be considered at the scale of infrastructure and territory or should it be engaged at the scale of the building and the materials that constitute it? Should we evaluate a material's environmental footprint on the basis of its embodied energy before and during construction, or should we enlarge the system boundaries and also consider a structure's impact on toxicity, maintenance, deconstruction, and biodiversity?

In fact, integration itself becomes a central focus of how the climate question can be confronted. Courses in the Building Science and Technology Sequence expose students to the most current tools in evaluating and assessing environmental impact but also the newest building techniques and systems to address it. History and Theory Sequence courses study past and present examples of climate-related design and consider possible futures. Courses in the Visual Studies Sequence and Methods and Practice Sequence allow students to experiment with materials, evaluate the impact of data and computational methods, and invent and reinvent forms of representation to communicate environmental goals. Finally, the Design Studio Sequence integrates all these accumulated skill sets in seeking a holistic approach to environmental stewardship, where students' investigations, research, and intentions are manifested in design proposals that aim to generate a more sustainable, equitable, and creative future.

**C. Methodology for Assessing Student Work**

Students are assessed based on their work and progress over the course of the entire semester. There is a constant process of evaluation and feedback from desk critiques, group presentations, seminars, formal pin-ups, mid- and final reviews, and digital submission of deliverables depending on the requirements of the course. All registered students are given a final grade by their instructors as described below:

**HP (high pass)** = a superior level of work

**P (pass)** = an acceptable level of work

**LP (low pass)** = work that meets minimum standards

**F (fail)** = work that is unsatisfactory



## E. Student Performance Criteria

### Realm A: Critical Thinking and Representation

#### A.1 Professional Communication Skills:

Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

Professional communication skills are indispensable to the architect's ability to adequately and efficiently express ideas about the built environment to a wide range of audiences, both within the profession and towards the general public. At GSAPP, these skills are taught and learned using a diverse set of media, formats, and techniques: from the most classical methods such as writing, drawing, or speech to the most advanced ones such as building information modeling; from the most technical ones such as construction detailing to the most filmic ones such as animation. The required courses **A4023 Architectural Drawing and Representation I**, **A4001 Core Studio I**, and **A4349 Questions in Architectural History II** demonstrate the teaching of this criterion.

From the first semester onwards, students are expected to be able to communicate their architectural projects through varied modes of visual and physical representations and to make concise and coherent verbal presentations. The first architectural representation course **A4023 Architectural Drawing and Representation I** and the first design studio **A4001 Core Studio I** are coordinated and designed to complement one another—linking the design process with representational practice and vice versa.

In **A4023 Architectural Drawing and Representation I**, students are introduced to the classical methods and conventions of architectural representation, and are asked to draw plans, sections, axonometric projections, perspectives, and diagrams for an existing project. In the course's second exercise, students produce a physical model using a wide variety of fabrication methods. In the third exercise, students produce an animation, introducing time as a representational tool. Working closely with instructors, students evaluate how their drawings, models, and animations effectively communicate their approach to representation. Innovation and clarity are weighed equally. Students regularly present work to colleagues and to a public of invited critics in a series of collective reviews.

In the first design studio, **A4001 Core Studio I**, students are exposed to architectural representation as a communication tool that will allow them to both evaluate and generate design. In the first exercise, students must produce a set of black and white line drawings that express the architecture of Broadway Avenue in New York and its contemporary condition. This prompt introduces students to composition, hierarchy, line type and line weight, and to drawing as a way to understand the city and challenge the conventions of orthographic representation —plans, sections, and axonometric projection. The role of diagrams, as well as drawings that can communicate time and non-visible phenomena, is emphasized. Subsequent exercises address the expression of light, materiality, and space using color and texture. Students draw plans and sections in full-color and build physical collages and perspective scenarios that they then photograph. Model-making as a generator and type of knowledge is applied at various scales. Students are asked to build a full-scale mock-up of their design and draw a 1:1 construction detail. Throughout the process, students present their work verbally in a series of informal and formal reviews that are open to the general public.

Beyond the act of communicating, the use of all these diverse representational media is also understood as a critical tool, transforming our understanding of the world around us, and addressing the much-needed connections across expertise, culture, and scale. This approach is particularly evident in **A4349 Questions in Architectural History II**, where students actively participate in a semester-long

dialogue that unfolds, explores, and contextualizes questions and problems that inform and challenge the historical imagination of architecture and, ultimately, enhance historical consciousness. Students are expected to actively engage in seminar discussions about complex ideas and to produce coherent written work. The core Questions of Architectural History classes demand a high level of reading, writing, and speaking. In light of this, GSAPP has been steadily raising the academic bar of its admitted students to make sure that writing and verbal skills develop equally to those in design and technology.

## **A.2 Design Thinking Skills:**

Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.

Design Thinking is at the core of the School's mission and commitment throughout the entire curriculum; every aspect of the School's pedagogy is devoted to enhancing critical and design thinking skills. The pedagogical agenda of the M.Arch program is rooted in insightful critique and questioning for the purposes of generating new knowledge through design. The structure of the curriculum itself assures that all students are adept at analyzing and evaluating architectural issues using abstract ideas to interpret information necessary for design work. The density of different perspectives and the variety of approaches and methodologies offered by the School's curriculum, along with the huge array of visiting speakers and events each semester, and the interdisciplinary exchanges staged between programs housed at GSAPP, invites each student to assume their own particular architectural position and to consider and test the impacts of that position alongside others. In particular, the required courses **A4001 Core Studio I**, **A4003 Core Studio III**, and **A4024 Architectural Drawing and Representation II** demonstrate the ability of this criterion.

In the Design Studio Sequence, each studio brief asks students to interrogate a topic through analysis, research, and investigation. In particular, in **A4001 Core Studio I**, as previously articulated, students are asked to approach the discipline of architecture from a contemporary perspective through the observation and a qualitative analysis of a particular area of Broadway Avenue in New York City. This studio looks at buildings and their urban context, positing what is often seen as the "quotidian" as a rich platform for deeper research that allows students to comprehend the complexity of the built realm as well as its actual functioning and requirements in relation to climatic, environmental, economic, social, and political issues. Students are expected to design architectures that answer to those realities, and that interpret available information in order to raise critical questions and construct well-reasoned arguments.

Questioning the contemporary context remains important in the following Core Studios. **A4003 Core Studio III** introduces students to the problem of designing collective affordable housing by understanding the balance between individual and collective needs, as well as between the needs of a building and a city. This is addressed first by creating housing unit types and solving the problem of aggregating the units not as an autonomous practice, but through systems of structure, program, accessibility, context, and environment. Students propose complex structures of repeated housing units to test alternative outcomes against relevant criteria and standards, learning lessons related to scale, structure, and systems, as well as engaging in the dialectic between form and function to define communities and place.

The act of raising questions and using abstract ideas to interpret information is also encouraged in Architectural Drawing and Representation courses. In **A4024 Architectural Drawing and Representation II**, students are asked to engage with architectural drawing as a critical and personal practice able to raise questions. The course focuses on computation and code as a necessary drawing environment for architects, and as a conceptual and technical lens of Design Thinking. Drawing is

approached as a language and a process rather than as an outcome. Using the latest computational tools and coding languages, students invent their own processes of drawing, experiment with representational strategies, generate and test alternative outcomes, and accept active risks. Bridging the analogue and the digital, students craft a system, machine, or tool to make drawings describing and activating spaces, phenomena, verbs, systems, and more. In the studio's final exercise, students use these accumulated skills to further articulate and question the agency of drawing and representation within a wider social, cultural, and political discourse. Outcomes are assessed through a series of collective drawing reviews with peers and invited critics.

### **A.3 Investigative Skills:**

Ability to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.

Critical and speculative investigative skills are foundational to the design methodology at GSAPP. The program enables and invites students to draw on, assess, record, identify, find, evaluate the many physical, digital, and intellectual resources available at the School: from faculty, archives, and online resources to the actual city of New York. The basic structure of Avery Hall—with Avery Architectural and Fine Arts Library providing the foundation to design studios above—communicates this mission. The ability for students to investigate using the resources available to them is demonstrated in the required courses **A4001 Core Studio I**, **A4348 Questions in Architectural History I**, and **A4003 Core Studio III**.

In **A4001 Core Studio I**, qualitative investigation is first approached as careful and critical observation of a particular context within its environmental as well as social, political, and cultural implications. From the very first exercise in Core Studio I onwards, students are encouraged to gather information—either spatial, written, or data-driven—from a variety of sources both digital and analog, and to carry out independent research as a key part of the design process. Through observation and research, students produce a set of drawings that represent and explore a particular area of Broadway Avenue in New York. Here, investigation manifested and expressed through drawing, captures the physicality of the city as well as other unphysical elements that are essential to the context. All the elements that are not perceivable but essential to the city are speculated as part of the design process. For example, students investigate the multiple movements of and interactions among people, goods, and services, and the invisible systems that support those movements. Understanding the contemporary functioning of the city through drawing, students establish a critical position that enables them to design accordingly.

Alongside Core Studio I in the first semester, students take **A4348 Questions in Architectural History I**, the first of a year-long pair of introductory courses in the required History and Theory Sequence. This sequence is organized around selected questions and problems that have, over the course of the past two centuries, helped to define architecture. Students are shown how to access and utilize a variety of both primary and secondary resources (such as peer-reviewed papers, scholarly books, and periodicals) available through Avery Library. Students have access not only to the physical and digital collections of Avery Library but also to GSAPP's Visual Resource Centre Digital Archive, an online database of thousands of images and recordings covering faculty research interests, images used in history courses, work presented by guest lecturers, and a visual survey of world architectural history from the past two centuries, which is currently being expanded to include materials from underrepresented traditions and practitioners, including Black architects and women architects, from around the world. Using these resources, students develop a critical understanding of how both the built environment and architectural theory are shaped by developments both internal and external to architecture, whether theoretical, economic, technological, or institutional in nature. As well as being educated in the use of

archival and data resources, students synthesize their research by writing an academic paper.

This investigative, research-based design methodology continues in the second semester with **A4002 Core Studio II**—where students work on public buildings—and deepens with **A4003 Core Studio III**, which includes a more complex program and incorporates a wider reality based in city life. In **Core Studio III**, students examine questions of density, comfort, and community as they intersect with affordable housing intended to serve a specific neighborhood and constituency—such as aging or vulnerable populations, and children. The course starts with researching and studying well-known architectural, formal, spatial, material, and structural examples of precedent buildings. Comparing and contrasting precedent housing projects through drawings and models, students uncover specific connections between architectural forms and related systems. This initial research is complemented by an investigation of the urban area and the social reality of underserved areas in New York City, with sites chosen across the city that vary every several years. Students are encouraged to make use of census, economic, and GIS data, and city policies in seeking to better understand the makeup of a neighborhood and local community. As students design for a particular constituency, this information works to affect their design goals. The Advanced Design Studios push this form of design research and investigation forward—building upon the knowledge and skills achieved in the core curriculum.

#### **A.4 Architectural Design Skills:**

Ability to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.

In a carefully-calibrated sequence of design studios, students are taught the principles of space- and form-making through formal, organizational, and environmental principles. The three-semester Core Studio Sequence develops a capacity to work with representation skills and invention at all levels of architectural design. In each step of the sequence, students are given focused tasks that require them to explore different scales of their design proposals, and are given continuous feedback as they encounter increasing levels of complexity—from a small urban intervention in Core Studio I to an institutional building in Core Studio II to a large collective housing complex in Core Studio III. The studios are structured in a way that supports an integrated approach to design: essential conditions of site, program, form, light, building thermal envelope, and materiality form the questions of the first semester studio; these questions are then explored through more complex programs and site conditions in the second and third semester studios. The required courses, **A4001 Core Studio I**, **A4002 Core Studio II**, and **A4003 Core Studio III** demonstrate the ability of this criterion.

In **A4001 Core Studio I**, students are introduced to architectural design skills through the design of a new space or set of spaces that raise a critical and coherent position in relation to the actual existing condition of a public/common/collective space. These new Architectures are designed by experimenting and controlling space parameters such as form, proportion, scale, light, color and materiality. This is the first exercise where students use basic formal, organizational, and environmental principles that inform a two- and three-dimensional design.

After this foundational studio, core design studios require a more complex set of architectural design skills. In **A4002 Core Studio II**, students are asked at the beginning of the semester to design volumetric spatial prototypes for an institutional building that considers a systematic range of relationships: part-to-part, part-to-whole, part-to-outside, and whole-to-outside. Incorporating both natural forces from outside the building (such as daylight and shadow, air flow, views) and organizational logics from inside of the building, students explore a range of spatial possibilities by weaving and overlaying these forces and logics. Principles learnt from the spatial prototype are then applied to a series of massing strategies on the project site itself, expressed and explored in physical and digital models that

must consider the existing built context, zoning envelope, and natural and human systems. These exercises form the foundation of the student's formal approach to their architectural proposal.

In A4003 Core Studio III, students are introduced to the challenge of designing collective housing for a select neighborhood by creating dwelling units and shared communal spaces, which invites them to address the problem of aggregation vis-a-vis form-making. Students start designing a prototypical unit that explores density and the notion of the minimal dwelling. They must reflect about the role of "the minimum" today, particularly in a location like New York often already at the minimum: minimum area, minimum light, minimum budgets, minimum amenities, and minimum proximity to fresh air. Students speculate on the limits and possibilities of this prototype. Formal exercises of unit repetition begin with a series of studies on structures and aggregation. Students propose complex massings based on unit repetition, incorporating lessons related to scale and structure, as well as engaging in the dialectic between form and function. Moving towards the site's neighborhood context, students apply this knowledge to inform their housing design.

### **A.5 Ordering Systems:**

Ability to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

In this moment of increased environmental awareness, architecture has to reduce its negative impact of climate-related hazards by optimizing, among other elements, the natural and formal way of ordering its systems. Addressing today's climate crisis through architecture and building is one of the main goals of GSAPP's M.Arch program and curriculum, influencing course content, lectures, symposia, and academic discussions. A fundamental understanding and ability to think through questions of environment is provided during the first semester of the program, and then opened up to experimentation in the following courses so as to support and explore possibilities for a better and more responsible building culture. The required courses **A4001 Core Studio I**, **A4004 Advanced Studio IV**, and **A4024 Architectural Drawing and Representation II** demonstrate the ability of this criterion.

Fundamentals of ordering systems to inform two- and three-dimensional designs are introduced in **A4001 Core Studio I**. After an initial design of a space—which relies on exploring values such as form, proportion, scale, light, color, and materiality—students are asked to design and build a mock-up, a 1:1 building fragment. With this exercise, students learn to control the environmental impact of construction materials and systems by considering processes of natural and ecological systems, extraction, lifespan, maintenance impacts, afterlives, reuses, and recycling procedures. In a world where construction systems are able to redefine global economies and ecological attitudes, a mock-up emerges as a critical architectural device that allows students to reflect on the value of ordering systems as well as the impact of architecture beyond the built realm.

Natural ordering systems are also the focus of **A4004 Advanced Studio IV**, held in the second-year Spring semester. In this studio the scales of the environment expand from the relationship of architecture to the "city" into the relationship of architecture to "nature," focusing on the larger territorial scale of New York State's mid-Hudson Valley region. This expansion asks students to explore a wide spectrum of natural and human-made sites: from park and nature reserves to vast plains and extreme topographies, from bodies of water—creeks, dams, and reservoirs—to agricultural fields, all the way to brownfields, sites of resource extraction and logistics. Through mapping exercises, students engage in these landscapes at multiple scales with an understanding of the seasonal and cyclical changes that characterize them, and the spectrum of species that inhabit them. Informed by these conditions, students explore two- and three-dimensional designs through land-form strategies that integrate architecture with its surrounds, through cut-and-fill earthmoving strategies that minimize construction footprints, through

topographic manipulations that produce in-ground, thermally-insulated, habitable spaces, through experimenting with renewable timber-wood as a construction material, and through considering water flow and water-holding strategies that measure and shape forms of settlements.

The Visual Studies Sequence, in particular **A4024 Architectural Drawing and Representation II**, asks students to use graphic and computation software to illuminate often invisible patterns and systems of technology, ecology, and social life that give form and visual order to factors that can inform architectural design. In the first exercise, students investigate existing ordering systems (both natural and formal) of a specific space and use computational software to create a series of generative drawings that record and visualize codes that shape phenomena or behavior. Using this knowledge, students are asked to use computation in combination with digital and physical media to invent their own ordering systems and generate a series of speculative drawings. Outcomes are assessed in a series of collective drawing reviews with peers and invited critics.

Apart from the above core curriculum courses, several Advanced Studios—premised on exploring type and on the relationship between biological and architectural systems—concentrate on experimental approaches to ordering systems. This increased emphasis on the territorial and the ecological context of architecture throughout the program has deepened students' understanding of biological and geological systems and continues to advance the discourse at the School around architecture's relationship to climate.

#### **A.6 Use of Precedents:**

Ability to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.

The design research culture of GSAPP, based upon the Avery Architectural and Fine Arts Library's remarkable collection, simultaneously reaches forward towards the future of architectural practice and back to the best practices of the past. Architecture is defined as a cultural construction that is deeply rooted in its history and its possible futures. Students are thus encouraged to see the past, present, and future as interlinked realities. The required courses **A4002 Core Studio II**, **A4003 Core Studio III**, and **A4023 Architectural Drawing and Representation I** demonstrate the ability of this criterion.

Precedents are used throughout the curriculum as methods for teaching. As a tool in design, they are introduced in **A4002 Core Studio II** with special attention to the typological evolution of an institutional building (such as a school, library, or bank). The precedent analysis allows students to analyze a building in the context of the historical morphology of a dense urban site. By studying how a building was built, how it has been used over time, and how it has served its urban community, students unearth the forces at play in the original design and see how those forces were resolved through architecture. Through the cumulative study of a series of precedent projects, students collectively gain a broad understanding of the key questions at play when designing an institutional building. Questions, which include: What are the current and historic educational philosophies of the building? What is the relationship between the container and the program? What is the relationship between structure and organization? What is the relationship between structure and natural light? How can relationships within the building and between the building and the city enrich a student's learning experience?

Precedents are used as a design tool in **A4003 Core Studio III** in the analysis of housing precedents (national and international) as they relate to various policy initiatives in New York City. Students produce plans and sections that investigate their precedent building's site, materials, density, program, and unit typology in relation to its public and collective spaces. Large-scale models are often produced as an additional piece of representation and precedents are discussed in a collective review. In

addition, several of these buildings are visited in-person with tours or neighborhood walks that ask students to understand the physical setting and multi-faceted context that intersects housing or any residential building. These references are collected in a format of cut-sheets containing both written and graphic information. While some of these projects are found in housing books, many are not. This archive of cut-sheets is an ongoing project that is updated yearly—becoming a collective database and resource for future precedent analysis.

Likewise, in **A4023 Architectural Drawing and Representation I**, rather than only experimenting in techniques of representation, students are asked to select a building and learn from the act of representing and then re-representing that precedent. After an initial analysis of the precedent that includes studying its plans, sections, and details, students interrogate the building through their own drawings that transcend various scales, from a detail to its context within the city, in order to understand it as a system linking ideas of form, function, and structure. Students then select a specific detail within the building for further exploration in drawing, model, and animation.

### **A.7 History and Global Culture:**

Understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.

The school is committed to positioning architectural practice within the complex and diverse cultural norms and narratives of a variety of indigenous, vernacular, local, and regional settings. Understanding of the parallel and divergent histories of architecture is part of the curriculum both in history and theory courses and in design studios. The required courses **A4348 Questions in Architectural History I**, **A4349 Questions in Architectural History II**, and **A4004 Advanced Studio IV** demonstrate understanding of this criterion.

This emphasis on history as relational and contested has become a focus at the School in the last years; in particular, the content of the first-year required history courses have changed substantially, and have been renamed **Questions in Architectural History I** and **II**. This two-semester sequence of introductory courses is organized around selected questions and problems that have, over the past two centuries, helped define architecture's modernity, which continues to inform our contemporary condition. Each course treats the history of architectural modernity as a contested, geographically and culturally-uncertain category, for which periodization is both necessary and contingent. Broadly speaking, both courses move in and out of the Western frame, with a strong emphasis on relational thinking and contextualization. Architecture as a discourse and practice, as understood from the Western perspective, is conceived in relation to others such as ancient, vernacular, or pre-modern. More importantly, **Questions in Architectural History I** and **II** have continuously transformed over the past years to question and decenter this Western perspective, and continue to develop an anti-racist, decolonized perspective in its place.

**A4348 Questions in Architectural History I** begins with the apotheosis of the European Enlightenment and the early phases of the Industrial Revolution in the late eighteenth century. From there, it proceeds in a rough chronology through the “long” nineteenth century. Developments in Europe and North America are situated in relation to worldwide processes including trade, imperialism, nationalism, and industrialization. Sequentially, the course considers specific questions and problems that form around differences that are also connections, antitheses that are also interdependencies, and conflicts that are also alliances.

**A4349 Questions in Architectural History II** addresses the twentieth century. Specifically, the course focuses on questions surrounding the definition and understanding of the modern, modernism,

and modernization, as architecture became institutionalized into a discipline, discourse, and profession. Modernism is treated in a relational manner. Rather than presuppose the equation of modernity with rationality, the course asks: How did such an equation arise? Where? Under what conditions and in response to what?

In addition to weekly readings, students in both courses examine key buildings, projects, and documents, along with at least one primary text, through which lecture and seminar questions are posed. Many of these buildings, projects, and primary texts have long been incorporated into well-developed historical narratives—such as those centered on Europe—while others, such as those from underrepresented traditions, cultures, and contexts, have not and continue to increase in importance as part of the course. The aim is to explore questions that arise, at certain times and in certain places, when architecture is said to possess a history. Students are encouraged to participate in active seminar discussions and must write research papers and essays on chosen topics.

In the design studios, **A4004 Advanced Studio IV** investigates the relationship of architecture to "nature"—and to "nature" as a historically constructed notion. The studio focuses on the regional, rural areas of the mid-Hudson River Valley in New York State, from which all the studio's sub-sections are required to choose sites. While the studios probe and act on this specific local geography and landscape, fundamental to Advanced Studio IV is a required lecture series where invited scholars bring a global perspective to those topics. Invited experts, who focus on the study of innovations within indigenous communities, are asked to speak and expose the students to alternative, ancient forms of green infrastructure and vernacular architecture practices. Students encounter the question of water and wetness in relation to habitation, as well as the colonial and post-colonial histories of rivers and water infrastructure in the global South. Other scholars are invited to speak more generally on the relationship between indigenous communities and environment.

### **A.8 Cultural Diversity and Social Equity:**

Understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.

Cultural diversity and social equity are central to the educational philosophy and studio culture at GSAPP. The required courses **A4003 Core Studio III**, **A4348 Questions in Architectural History I**, and **A4349 Questions in Architectural History II** demonstrate understanding of this criterion.

Considering how difference is constructed and upheld in the built environment is a question of design at GSAPP. Learning and designing for better cultural diversity and social equity is at the core of most studio design courses, which ask students to design *with* diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that mark our present world. This is especially evident in the required housing studio, **A4003 Core Studio III**, in which each student examines the significance of collective affordable housing through an inclusive approach. The studio operates as a laboratory in which to explore new possibilities for urban living in underserved neighborhoods in New York City. The studio asks many questions: What kind of housing is needed or could exist in this particular area? What is dense enough? What kinds of neighborhoods are culturally, socially, and economically beneficial to develop? Rather than readily accepting the status quo of housing, the studio asks students to re-examine the performance of housing. How does housing play a central role in ensuring social equity and welfare? Students also learn the required regulations in relation to accessibility (ADA Standards for Accessible Design) and are asked to design according to them.

In parallel with the design studios, an understanding of cultural diversity is addressed in the History and Theory Sequence—**A4348 Questions in Architectural History I** and **A4349 Questions in**

**Architectural History II**—through the act of engaging discussion and critical reflection about how architectural history (and particularly modern history) has been defined, looking at and interrogating existing nineteenth and twentieth century discourses, and adding to the present. What we now call “Architecture” was born not long ago as a discourse and a practice conceived in relation to other practices variously described as ancient, vernacular, or pre-modern. Course discussion starts by treating categories like “modernity,” “modernization,” and “modernism” in a relational manner. Through questioning, both courses treat the history of architectural modernity as a contested, geographically, and culturally uncertain category for which periodization is both necessary and contingent. The resulting tensions that have animated architectural discourse and practice throughout the period continue to shape our present.

The history and theory curriculum is structured throughout to achieve an awareness of architectural history in its diverse cultural and social context. The selection of courses since the last accreditation has increased substantially. The required distribution sequence has recently been re-oriented along both chronological and geographic lines, in consideration of the asymmetries that traditional binaries often reproduce, the new categories being simply: pre-1800, post-1800; North or West (N/W), South or East (S/E). The aim is to expose students to a diverse range of subjects broadly distributed in both space (geography) and time (chronology). Distribution courses that address cultural diversity and social equity include: **A4385 Arab Modernism; A4620 Building China; A4552 Dark Space: Architecture Representation and Black Identity; A4780 Architecture and Human Rights; A6806 Building Islam; A6826 African Cities; A6846 South East Asia and Post Colonialism; and A6872 Feminist Perspectives on Architectural Practice.**

## **Realm B: Building Practices, Technical Skills, and Knowledge**

### **B.1 Pre-Design:**

Ability to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.

Questions of pre-design have particular importance at GSAPP and have been implemented throughout the curriculum. Ability in the criterion is demonstrated through the design studios **A4002 Core Studio II, A4003 Core Studio III**, where students are asked to invent, refine, or transform a traditional architectural program based on typological precedents, site analysis (including existing preserved structures on the site), relevant building codes, and sustainability requirements. While Core Studio II examines the design of a public institutional building and Core Studio III explores the domestic scale within high-density affordable housing, they both require students design with specific constituencies in mind. Additionally, in the required technology course **A4115 ATV Urban Systems Integration**, students choose and prepare a comprehensive program for a campus plan that accounts for urban infrastructural systems and the various needs that arise from these systems.

In **A4002 Core Studio II** students re-imagine and design a small institutional or cultural building (a library in 2019 and a school in 2020) with an evolving architectural identity and programmatic use. The program becomes a central question as students seek to address multiple constituents on a site within New York City. Students are asked to expand the prescribed program of the building type by first completing a detailed analysis of the current conditions of the site and its context, often including an existing building on their chosen site location. Through programmatic studies of comparative historical and contemporary precedents, both local and global, students are asked to challenge cultural pre-

conceptions of the given program and identify opportunities to improve and develop it while operating within the city zone building code. Students are introduced to program as a driver to define use and spatial organization. A major part of the final review is when students defend a new comprehensive program developed in the pre-design phase.

In **A4003 Core Studio III** (affordable housing sited in underserved areas in New York City) students take design preparation further, developing a comprehensive understanding of program through the design of a housing project. They are required to prepare an assessment of user needs, develop an understanding of the program's spaces and equipment requirements, and perform a detailed review of the public policy and regulations that apply to the site. Further knowledge of the site is gained through a multi-layered analysis of site conditions. Programming is examined in relation to policy, financing, need, and demographics. Visiting experts from different consultant fields are invited to brief the students on the relevant regulations, site conditions, and local cultural issues that their designs will need to accommodate. Students are asked to articulate and defend their evolving and final design decisions in terms of this pre-design analysis, and are encouraged to return to reconsider the analysis for further input at each phase.

Within the Building Science and Technology Sequence, **A4111 ATI Environments in Architecture** and **A4115 ATV Urban Systems Integration** address pre-design analysis. Starting in the first semester, **A4111 ATI Environments in Architecture** teaches students how to do critical site reconnaissance and analyze the environmental conditions of the building site while accounting for thermal comfort standards and energy code requirements. **A4115 ATV Urban Systems Integration** applies this knowledge and elaborates on the programming challenge by expanding the conversation to urban infrastructure and into systems that play an increasingly critical role in shaping the form and function of a building. By studying urban systems such as water, energy, and mobility at an increasingly granular scale—starting with the entire city and moving down to the neighborhood, site, and immediate building perimeter—students develop a full understanding of the interplay between a building and multiple urban systems. Students are asked to develop their own comprehensive program for an urban campus plan, sited in the metropolitan New York area, that is responsive to these urban systems. As the planners of the campus and the architects of its first buildings, students have complete control over the development of the site plan, program, and systems.

## **B.2 Site Design:**

Ability to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.

Site and context—as cultural, historical, technical, material, and ecological conditions—are perhaps the most major preoccupations of the School in all design studio teaching, as well as in building technology courses. Ability in this criterion is demonstrated through the required courses **A4001 Core Studio I** and **A4003 Core Studio III**, where the issue of specific site characteristics, both natural and human-made, is explicitly fundamental to the design exercises. Additionally, starting in the first semester in the Building Science and Technology sequence (in **A4111 ATI Environments in Architecture**), native and historical conditions of vegetation, soil, and topography are explored and a comprehensive evolutionary parametric analysis is used to examine different building orientations on thermal comfort and energy criteria. In **A4115 ATV Urban Systems Integration** this knowledge is applied to the high-density urban conditions that were explored in the Core Studios and is further overlaid with an examination of infrastructural systems at the larger urban and geographic scales. Finally, Advanced Studios continue and expand on the site complexities explored in the Core Studios, shifting the focus to regional and global urban sites and landscapes.

The first two Core Studios ask students to approach their architectural designs in response to a wide variety of site conditions. **A4001 Core Studio I** focuses on the analysis and dissection of the highly complex urban network unfolding along Broadway, providing multiple sites for design investigation. Projects adapt a strategy of physical intervention on the existing urban fabric by negotiating existing public and private space instead of proposing new autonomous building structures. By directly interacting with existing physical conditions, students are forced to work with a high-degree of site specificity, analyzing and responding to the city's developmental patterning, historical fabric, topography, ecology, climate, and building orientation.

**A4003 Core Studio III** focuses on the study of an urban block in an underserved neighborhood of New York City (first East Harlem and, since 2015, the Bronx). Sites are carefully selected to feature a complex overlay of social and urban conditions that students must address. Students are required to pay special attention to the site's local conditions including existing populations, infrastructures, and topography while exploring the history and evolution of the urban fabric as a whole in response to New York City's history of affordable housing typologies. Students produce massing models and develop site strategies addressing building orientation and daylighting (tested through analysis software). Increasingly, the question of climate impact and density are at the forefront of students' housing projects.

Within the Building Science and Technology Sequence, **A4115 ATV Urban Systems Integration** expands the technical understanding of site and context by including the study of infrastructure and geographical systems such as watershed, local sewer shed, electrical grid, transportation, and waste management. The course introduces a series of lectures that examine the influences of these larger contextual systems on the architectural building scale through case studies. This knowledge is then applied to the design of a campus project through iterative site strategies responding to urban systems first, followed by iterative building strategies. The project is carried out in collaboration with a lead critic and the assistance and input of invited technical consultants specifically in water, energy, and mobility, who interact with the students in a weekly workshop format across the entire semester.

### **B.3 Codes and Regulations:**

Ability to design sites, facilities, and systems that are responsive to relevant codes and regulations and include the principles of life-safety and accessibility standards.

The ability to respond to codes and regulations is an integral part of architectural design especially when operating in an urban context such as New York City. Ability in this criterion is demonstrated in the required technology course **A4114 ATIV Building Systems Integration**, where codes and regulations (for instance, the technical understanding of life-safety and accessibility standards) are reinforced as parameters of design through lectures and technical drawings. Principles of codes and regulations are also introduced in required design studios, both **A4002 Core Studio II** and **A4003 Core Studio III**.

In **A4114 ATIV Building Systems Integration** the codes and technicalities of life-safety, fire protection, and egress are addressed in specific lectures and then applied to a semester-long design-based project of a theater in Brooklyn. The course is an intensive introduction to the application of technical systems through design and integration. The course objectives establish an understanding and experience in the constructive and technical aspects of architecture. Structural form, environmental systems, materials, construction methods, and fire protection elements are developed both systematically and in conjunction with one another in the production of a comprehensive construction document set. Knowledge of codes and regulations is therefore directly applied in the integrated building project, which is structured around weekly lectures and workshops with a primary architectural critic and experts in the field, including structural, enclosure and MEP engineers. Students' technical knowledge is demonstrated through the production of a final set of construction drawings which includes ¼" scale egress plans and

sections as well as 1/2" scale rated wall sections that explore the fire protection material assemblies to satisfy the codes.

**A4002 Core Studio II** introduces building codes and regulations as parameters for the design of an institutional building focusing specifically on principles of life-safety and egress. In a lecture with an invited civil engineer, students are introduced to topics including occupancy calculations, egress requirements and travel distances, stair/corridor dimensions, construction classification, and sprinkler diagramming. Students demonstrate their basic conceptual knowledge on these topics in a specific exercise and start to incorporate key life-safety concepts into their own studio projects.

In **A4003 Core Studio III**, building codes—including zoning, building envelope, set-backs, and building footprints—are posed as parameters to understand the existing site conditions and produce building massing studies accordingly. Core Studio III also integrates codes and regulation into design thinking by requiring the projects to comply with both ADA requirements and zoning requirements of New York City. Both requirements are introduced in the studio in lecture and by individual critics, and students are referenced to official online governmental sources for proper study. Life-safety, zoning, and accessibility are also examined when studying housing building precedents early in the semester.

In addition, regulations are addressed in **A4560 Professional Practice** with an emphasis on building codes and prescriptive zoning regulations, deriving from New York City's response to the 1916 construction of the Equitable Building, subdivision regulations, historic preservation laws, and private covenants. Codes and regulations are also outlined in subsequent lectures, particularly regarding aspects of egress, construction classifications, and limitations based on use, fire suppression systems, and construction types. Sections of the current International Building Code are utilized as examples. This knowledge is evaluated in active class participation and discussion, small weekly assignments, and a final exam at the end of the course.

#### **B.4 Technical Documentation:**

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

Ability in this criterion, which since the previous NAAB accreditation has been demonstrated in the Building Science and Technology Sequence—specifically courses **A4114 ATIV Building Systems Integration** and **A4115 ATV Urban Systems Integration**—is now also introduced as early as the required **A4001 Core Studio I** through the construction of 1:1 mock-ups, and in the required **A4003 Core Studio III** through the integration of technical systems into the design of a high-density building type.

In **A4114 ATIV Building Systems Integration** students produce a complete set of technical drawings of a building that includes the integration of technical systems and selection of material assemblies. The overall intent of the course is an intensive introduction to the application of technical systems through design and integration at the building scale. The course objectives establish an understanding of and experience in technical documentation including detailed wall sections that clearly illustrate material components and assembly. Students are asked to select and develop—through drawing—appropriate assemblies of materials, systems, and components appropriate for their building design. Façade and envelope systems are explored simultaneously in **A4113 Envelopes**.

Students' ability to draw, specify, identify, and model material and technical systems is expanded in **A4115 ATV Urban Systems Integration**, where students build on the knowledge from previous technology courses at the urban and city scale. As part of the comprehensive design problem at the urban scale, students are required to produce a complete outline specification in the form of a comprehensive booklet.

In the design studios, **A4001 Core Studio I** introduces the same technical knowledge at a more

schematic and conceptual level through the making of a large-scale 1:1 mock-up that requires students to assemble materials based on their physical characteristics and then draw a large-scale detail. Students are expected to design and experiment with materiality and technical requirements.

**A4003 Core Studio III** also explores the assembly of materials in large-scale models, while drawings are encouraged to include technical systems. Knowledge of building systems integration obtained from previous and concurrent technology courses are applied directly into design thinking in consultation with design studio critics. Examples of technical documentation include detailed plans and wall sections that show the assembly of materials as well as the adoption and representation of building systems such as passive cooling and heating.

In addition, **A4560 Professional Practice** covers specifications writing, CSI format, prescriptive vs. performance, sections of specifications, general vs. specific, how the technical sections of specifications fit into the project manual, and how correlation and intent work vs. the relationship between specifications and working drawings. This knowledge is evaluated in active class participation and discussion, weekly small assignments, and in a final exam at the end of the course.

### **B.5 Structural Systems:**

Ability to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

Ability in this criterion is demonstrated in the required **A4112 ATII Structures in Architecture**, within the Building Science and Technology Sequence, where structural analysis and structural systems design are first introduced. The technical knowledge gained from this course is directly applied in the concurrent design studio course **A4002 Core Studio II** where structural logics are explored as organizing frameworks with environmental implications in spatial design. In **A4114 ATIV Building Systems Integration** the selection of an appropriate structural system and its technical documentation becomes an integral component of the students' integrated building project.

**A4112 ATII Structures in Architecture** introduces structural systems and materials as well as fabrication and assembly, including structural calculation and computation and seismic design parameters. Through four modules that range from first principles and analysis to construction and innovation, students critically assess existing structural forms and material assemblies. The objective is a more complete understanding of the process of selecting, analyzing, documenting, and building a unique structure. This knowledge is evaluated in active class participation and discussion, small assignments that include computational analysis, and a final presentation and project on a chosen structural system. This course runs parallel and is closely coordinated with Core Studio II in the first year Spring semester.

In **A4002 Core Studio II** students explore the spatial capacities of structural systems including attention to the material deployed, its efficiency, and its carbon footprint. Structure is emphasized as a fundamental ordering system for the design project. Students consult with invited structural engineers over the course of the semester to develop their project's structural system and logics. Besides drawing structural diagrams, students are required to incorporate structural details within an isometric cut-away drawing, and often develop models that demonstrate their structural system's ability to withstand gravitational and lateral forces. In addition, structural logics are explored in subsequent studios. For example, in **A4003 Core Studio III**, the spatial potential of building structures is tested by the vertical stacking of housing units in medium and high-rise buildings. Students draw and diagram structural systems for their final design presentation.

Structural lectures are given in the **A4114 ATIV Building Systems Integration** course covering lateral systems and foundations. Students are taught complete structural systems for entire buildings by 3D modeling the structure, including the building foundations, which is required for the final structural

drawings set. 3D modeling includes the analysis and the design of shear-wall, wind truss, moment frame, and bearing wall systems to demonstrate understanding of structural systems typologies. Students are scheduled to meet weekly with an assigned structural engineer within their workshop group to review the development of their structural drawings.

### **B.6 Environmental Systems:**

Ability to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.

Environmental systems are playing an increasingly important role in the School. Five years ago, to meet the increasing concern for sustainability, the School reshaped the Building Science and Technology Sequence to emphasize an integrated approach to environmental systems. Ability in this criterion is first comprehensively demonstrated through the required **A4111 AT I Environments in Architecture**—which introduces simulation tools to test environmental design ideas—and is followed by more technical lectures and exercises in **A4114 AT IV Building Systems Integration**. These subjects are also introduced at the building scale in **A4002 Core Studio II** with an emphasis on deploying and testing passive environmental systems in the design of an institutional building.

**A4111 AT I Environments in Architecture** focuses on introducing students both to the relationship between building dynamics and environmental systems and to appropriate measuring tools and software that are at the architect's disposal today to model thermal, light, and wind flow performances. This is achieved through a series of assignments and by asking students, in a semester-long project, to analyze, calculate, and represent the environmental performances of relevant architectural precedents from a range of diverse geographic contexts.

In **A4114 AT IV Building Systems Integration** the architectural implications of environmental systems are addressed through a series of lectures on applied passive and active HVAC systems as well as electrical and lighting systems. In addition, the concurrent **A4113 AT III Envelopes** course also addresses environmental systems through a lecture and assignment on the thermal performance of building facades and envelopes. This comprehensive knowledge is then directly applied into the integrated building project in **AT IV Building Systems Integration**. Students produce a construction drawing set that requires drawings illustrating sustainability strategies, air and water riser diagrams, 1/8" scale HVAC plans, and 1/16" scale drawings of water and electrical systems.

**A4002 Core Studio II** also introduces an assignment early in the semester that asks students to build multiple massing models that respond to the natural geographic context, including natural light and air flows, that are essential to the health and the well-being of school program constituents. Students are asked to produce diagrams representing solar geometry and air flows, and to build models where light is tested by photographing them in daylight conditions. Furthermore, for their final presentations, students are required to develop a large-scale isometric cutaway drawing that shows the movement of air and light through their project proposal.

### **B.7 Building Envelope Systems and Assemblies:**

Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

An understanding of building envelope and performance is fully demonstrated in the required **A4113 AT III**

**Envelopes** course through a series of lectures and assignments on enclosure types. This knowledge complements the integrated building project in the required **A4114 ATIV Building Systems Integration** course and is put to use in **A4003 Core Studio III**, where students are asked to demonstrate their understanding of envelope design through housing facade studies.

**A4113 ATIII Envelopes** is structured to cover glazed and opaque building enclosure types through a series of lectures on topics including: the thermal and structural performance of building envelopes, and the study of waterproofing and wind-proofing criteria. Students complete assignments detailing opaque systems and glazed systems, R-value calculation, structural diagrams, and material selection which inform their final enclosure drawing set for the integrated building project.

In **A4114 ATIV Building Systems Integration**, students are scheduled to meet weekly with an assigned enclosure specialist within their workshop group to review the development of their enclosure drawings for their integrated building project. The choice of enclosure system becomes a key driving factor for both the architectural identity and the performance of their project. Students produce an enclosure set of drawings that includes mapped elevations, 3D facade systems diagram, a material and glazing schedule, and specification description and details at 3"=1 scale of at least two facade systems employed.

The design studio **A4003 Core Studio III** is taught alongside these technology courses. It applies the knowledge gained in the technology courses to the design of a medium-scale, high-density housing type. Students are asked to build a partial 1/2" scale model to investigate facade fenestrations. In addition, students are asked to draw building section details at 1/8" scale—studying the opening apertures in relation to the envelope's environmental performance; and articulating the envelope's material assembly systems, cladding, and glazing details.

### **B.8 Building Materials and Assemblies:**

Understanding of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

The understanding of this criterion is primarily demonstrated throughout the Building Science and Technology Sequence, in particular **A4113 ATIII Envelopes**, through lectures focusing on the technical design of and analysis of projects. The required **A4001 Core Studio I** also demonstrates the understanding of this criterion by introducing students to a set of questions on inherent material property in terms of renewability and recyclability characteristics. Material assembly principles are further addressed in the required **A4003 Core Studio III** through building design exercises.

**A4113 ATIII Envelopes** presents a series of lectures on envelope typologies, with a focus on materials (both opaque and glazed systems). After a series of facade material assembly assignments, students develop their own facade assemblies, interior and exterior wall assemblies, and material choice, for their integrated building project with the assistance of an enclosure specialist over the course of the entire semester. This information is presented in the comprehensive drawing set as part of the final submission for the course. Lectures are also designed to introduce performance criteria of the facade system assessing the environmental impact through the study of thermal performance requirements.

**A4001 Core Studio I** explores material resources with minimum impact on the environment. It requires the students to construct a 1:1 building mock-up as a fragment of their design proposal. In this exercise, students are asked to experiment with material selections with reusability potentials and to develop an understanding of production and assembly systems.

**A4003 Core Studio III** applies this technical knowledge to housing and asks students to develop and draw large-scale wall sections of their proposal's construction material and assembly. Additionally,

students employ internal perspective drawing techniques to clearly illustrate the make-up of the building's public and private interior finishes. The studio reframes the interface between inside and outside, the finishes, and the choice of construction assembly systems as concerns and questions of housing—specifically relevant to arguments made for affordable housing. Experimentation in materiality and consideration for environmental sustainability is encouraged in plan, section, and elevation drawings, and in a series of models that students construct for their projects.

### **B.9 Building Service Systems:**

Understanding of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

Understanding the role of building service systems—specifically with regards to constructibility, materiality, and real-world involvement—has become increasingly important throughout the School as a way to confront today's climate crises. The understanding of this criterion is demonstrated through the required building technology courses **A4111 ATI Environments in Architecture**, which introduces all building services systems, and **A4114 ATIV Building Systems Integration** and **A4115 ATV Urban Systems Integration**, which respectively builds general principles from ATI into an advanced technical lecture series, and applies them in the integrated building project and integrated urban project. In the design studios, building service systems are introduced on a diagrammatic level in **A4002 Core Studio II**.

Through its comprehensive lecture series, **A4111 ATI Environments in Architecture** introduces the basic principles of HVAC systems, vertical circulation, and fire protection, electrical, and lighting systems. Systems are studied by analyzing relevant building precedents and by learning how to use computation to measure and simulate air, sound, light, and thermal comfort within a building. Students are evaluated through active class participation, a series of assignments, and two comprehensive presentations that include building system diagrams, detail diagrams of systems components, physical or test models of the building system, and a computational model.

**A4114 ATIV Building Systems Integration** expands on those topics with additional specialized lectures on electrical and lighting systems as well as on the relationship between mechanical systems and sustainability parameters. These systems are then applied in a construction drawing set produced for the integrated building project in the M000 drawing series. A special lecture is given on fire protection strategies, including egress strategies and egress design. This information is applied in the A500 Egress Plan drawing, included in the construction drawing set.

In **A4115 ATV Urban Systems Integration** extends the thinking of building service systems to the urban and city scale. Students are asked to address the external urban forces, water energy, and mobility that shape their building. In a campus design project, which includes the design of its buildings, students address how building service systems are integrated into urban-scale infrastructural networks that extend to the regional watershed, the local sewer shed, the city's electrical grid, and local and regional transportation networks.

In addition, building systems are introduced early within the core sequence. For example, in **A4002 Core Studio II** students are introduced to principles for passive cooling, heating, and efficiently lighting an institutional building with a multi-use program (most recently a school and in the past a library and a bank) as parameters for design. Students are asked to incorporate strategies of passive systems within their design and to produce a large-scale isometric cut-away section that details the relationship between the inside and the outside of the building. Students are also introduced to life-safety systems and means of egress for institutional buildings in a lecture given by a civil engineer and are asked to complete an egress diagram exercise that demonstrates their knowledge and competency.

## **B.10 Financial Considerations:**

Understanding of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.

Financial considerations have taken an increasingly important role across all courses as the School shifts its focus towards actively addressing the climate challenge. The understanding of this criterion is demonstrated in **A4560 Professional Practice**, and in the required technology course **A4114 ATIV Building Systems Integration**. Financial considerations are also demonstrated in the design studios, in particular **A4003 Core Studio III**, which highlights the importance of construction affordability, economy of material, and material lifecycles in high-density affordable housing.

Financial considerations including project financing methods and construction scheduling is covered extensively in **A4560 Professional Practice**, addressed in specific lectures and tested in the course final exam. Cost estimation (both operational and life cycle) is discussed in terms of different methods of estimating, and students are taught who is responsible for each phase, who can appropriately perform the services for different types of projects, and what the architect's responsibilities to the client are.

Cost control issues and estimation are addressed in a lecture for **A4114 ATIV Building Systems Integration**. As part of the development of their integrated design project, students undertake cost take-off measurements and quantity counts, develop rough cost estimates based on historic and localized sets for comparing regional cost implications, and produce a report outlining the economic viability and the Hard Cost of Construction (HCC) of their final design project. This report is submitted alongside the final construction document set.

The implications of construction affordability and financing are addressed in the **A4003 Core Studio III** lecture series. Through these required lectures, which are designed to inject real questions of, feasibility (such as zoning, etc.) into imaginations of housing, students learn about how different affordable housing models and strategies that have been historically, culturally, and politically applied in New York City work in parallel with other contexts in North America. The studio lecture series also invites experts to introduce community development housing models and community-driven affordable solutions.

## **Realm C: Integrated Architectural Solutions**

### **C.1 Research:**

Understanding of the theoretical and applied research methodologies and practices used during the design process.

As an active member of a leading research University, GSAPP is highly invested in advancing the research skills of all its students. Research is treated as a critical component of the design process and practice. Many of the GSAPP faculty who teach within the M.Arch program are leading researchers in their fields; our faculty is a diverse group composed of scholars producing new knowledge that advances the limits of their discipline and practitioners upending current forms of practice through research.

Throughout the curriculum, in particular within the Design Studio, Visual Studies, and History and Theory Sequences, students are exposed to a plurality of qualitative, quantitative, and critical research methodologies. The underlying goal of these courses is to provide students with exposures to multiple methods of research and study—both theoretical and applied—which enable them to identify and select strategies for developing solutions to problems encountered in complex architectural projects.

In **A4001 Core Studio I** research is approached as a qualitative critical observation exercise

through the frame of architectural drawings and representation. In the very first assignment of the studio, students are asked to produce a series of interpretive line drawings and analytical diagrams for particular sections of Broadway Avenue in Manhattan. Through the design and construction of these drawings, students are asked to unpack the complexities of the architectural and urban layers of Broadway. In this assignment, they engage in a qualitative research methodology by representing the buildings in relation to their urban context, at multiple scales and through various lenses, in order to reveal the physical and immaterial aspects present in the making of the city. Through this rigorous set of drawings, students comprehend and analyze the complexity of the built environment in relation to broader economic, socio-political and environmental issues. These new forms of representation form a basis for the subsequent design exercises, becoming a tool for the development of architectural interventions.

This process continues throughout the following design studios, particularly in the third-semester housing studio, **A4003 Core Studio III**, which expands an understanding of research to include a breadth of quantitative information and data. In this course, students are asked to undertake research on specific topics, gathering information from a variety of sources (digital and analogue) as a critical part of the design process. For example, students will use census records to extract demographic data on the community they are working with, and couple it with further climatic data to understand the environmental condition of their neighborhood in order to systematically and comprehensively understand the site they are operating on. Information is sought and aggregated from public resources and peer-reviewed articles, as well as through engaging in site visits and conducting on the ground interviews. This method is further enriched through studio travel to national or international sites, allowing students to personally experience and document relevant sites and building precedents. Additionally, each studio section sets its own research agenda tailored by the theoretical interests of the teaching instructor. This diverse set of research findings then becomes a body of knowledge that is shared across all studios through joint pin-ups and presentations.

The History and Theory Sequence takes a critical approach in both the conception of architectural history and its research. In the required course **A4349 Questions in Architectural History II** students assemble, read, and analyze a substantive body of primary and secondary resources (peer-reviewed papers, scholarly books, and periodicals) available through the archival collection of Avery Library, one of the leading architectural research libraries in the United States. Within the course, students' research findings are shared through active discussions in faculty-led seminar subgroups. These discussions prompt students to interrogate their sources, encouraging them to collectively debate the arguments presented in the taught historical material. Required critical essays and papers become the tools through which students are challenged to synthesize their research, formulating and communicating their own independent arguments. The course considers research as a critical platform through which to understand the complexities of modernity in relation to both disciplinary (architectural) and extra-disciplinary concerns, and as a generative practice that suggests further avenues of inquiry.

Students continue to conduct scholarly research in the advanced history/theory seminars, continuing to apply the methods of historical and contemporary inquiry transmitted through Questions in Architectural History II. These courses provide students with a practical awareness of research frameworks, providing them with a resource for understanding the complex design problems presented within the design studios.

In addition, the Advanced Studios build upon the basic research skills transmitted in the Core Studios. For example, in **A4004 Advanced Studio IV**, students undertake research centered on rural areas in upstate New York, with a focus on analyzing material and water resources, food resources, infrastructure, industrial sites, and man-made and artificial landscapes. Often the Advanced Studios also participate in major material research initiatives at the school. For example, students in Associate Professor David Benjamin's third-year Advanced Studio V (2019) conducted research exploring the

potentials of biomaterials, a process which included growing natural building materials and experimenting with parametric construction methods. This studio was part of “Public Works for a Green New Deal,” a larger research project and symposium that was led by the Buell Center in the Fall of 2019 in collaboration with the School. As part of the project, the Buell Center curated a series of courses across GSAPP’s programs, framing a conversation around considerations of the social, technical, and political implications of the proposed public policy known as the Green New Deal (GND).

## **C.2 Integrated Evaluations and Decision-Making Design Process:**

Ability to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

The ethos of research at GSAPP extends to its approach to design thinking. The ability to gather information and to properly evaluate it is essential in making integrated design decisions. In an era oversaturated with both information and misinformation, the School is concerned with helping students develop skills to effectively and critically evaluate the sources and references they use and to set clear criteria and outcome assessments for their work.

This process of integrated evaluation begins in the design studios in the first semester and continues at increasing levels of complexity. This is especially true in **A4002 Core Studio II** and **A4003 Core Studio III**, which provide the space to develop tools for evaluating information and understanding the interplay between multiple systems. These tools become increasingly important within the analytical approach of the Building Science and Technology sequence, especially in **A4115 ATV Urban Systems Integration**.

In **A4002 Core Studio II** students carefully evaluate multiple variables in their design project through a structured series of assignments that cover typology, context, structure, and program. These investigations introduce a framework for thinking across multiple systems and scales as a means for making integrated design decisions in the final project. In Core II, students have their first exposure to typological precedent analysis. They are asked to assess the formal and spatial design principles of their chosen precedents through both analytical and conceptual drawings. This analytical assignment leads directly to the design of spatial prototypes, represented in both models and drawings. In the following assignment, students investigate and document the project’s site context including its natural and human-made environs and participate in a guided site visit led by their teaching critics. Following this trip, students build a site model that synthesizes their site findings. Using that model and the insights gained from their direct observations, students produce multiple massing models and analytical drawings to explore and test site strategies in relation to the physical context. Finally, students are asked to expand the prescribed program of the typical institutional building (school, library or bank) by completing programmatic studies of comparative historical and contemporary precedents (local and global) and adding public programming, thereby challenging the cultural preconceptions of an institutional building and responding to the needs of the site’s diverse constituents. This multi-step process of incrementally evaluating and synthesizing gathered data becomes the knowledge base from which all students build their design proposals.

In **A4003 Core Studio III** students develop a body of research focused on housing typologies and on the history of housing in New York City. This rigorous typological research is shared across all studio sections in collective pin-ups and presentations of research findings, and becomes the analytical framework for the exploration of the housing design exercise. The studio starts with a walk from the Columbia University campus in Upper Manhattan to the studio site in Harlem or the Bronx. This transect, walking past multiple historical and contemporary housing projects, represents a cross section of the

city's history of housing. This first direct experiential encounter with the City, framed through the lens of its housing typologies, is then critically mapped and evaluated along with data gathered from subsequent site research, and translated into analytical diagrams. This is followed by the first drawing exercise, which focuses on the research and evaluation of built housing precedents. Here, students are expected to reproduce plans and sections that investigate their precedent building's site, materials, density, program, and its unit planning in relation to public and collective spaces. A large-scale model is often produced as an additional representation of the outcome of this research. In conjunction with the analysis of New York City, later in the semester, students and faculty also participate in studio travel to another city, in the US or internationally, for the purpose of visiting and experiencing housing precedents within a broader range of cultural and social contexts. The collective knowledge produced during this research phase is then individually applied and tested through design iterations of housing proposals. With feedback and critical interrogation of these proposals by their studio critics, students learn to evaluate their effectiveness and are challenged to integrate their research into structured design arguments.

In the last required Building Science and Technology course in the second-year spring semester, **A4115 ATV Urban Systems Integration**, students integrate multiple design variables not only across technical systems but also across multiple scales. Students research and examine urban infrastructure starting at the scale of the entire city, then tighten their focus to the scales of the neighborhood, the site, and finally the building perimeter. This process is designed to set up a more complete understanding of the interplay between a building and the urban systems shaping it. The first phase of the semester consists of rigorous analytical research of three urban systems: water, energy, and mobility (transportation). Using computational tools and software, students are able to measure the effectiveness and deficiencies of those systems, and to simulate and test possible design iterations based on the implications and impact of those systems on the buildings they are designing. Invited consultant engineers, brought in during weekly workshops with the students, play a key role in the semester, bringing a professional lens to the interpretation and assessment of this data and further calibrating the research synthesis. This knowledge assessment structure gives students complete control over the information necessary for their design work that they undertake in the subsequent part of the semester—developing a campus master plan and its component buildings.

### C.3 Integrative Design:

Ability to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

GSAPP's M.Arch curriculum seeks a holistic approach to integrative design throughout its course sequences. As design projects increase in complexity, the underlying goal is for students to gain the ability to synthesize a wide range of variables in their design proposals. Course sequences are brought together at critical junctures through the crafting of specific exercises, the sharing of knowledge and skills, and the integration of broader project requirements.

This is especially true in the relationship between the Design Studio and the Building Science and Technology Sequences. Both move in parallel towards increasing project integration, mutually supporting each other and interacting in specific ways. **A4002 Core Studio II** is carefully calibrated with its respective technology course **A4112 ATII Structures in Architecture** and the previous **A4111 ATI Environments in Architecture** course, allowing students to draw on that knowledge to help inform their design decisions in the studio. **A4114 ATIV Building Systems Integration** and **A4113 ATIII Envelopes** share a comprehensive design-orientated integration project developed over the course of an entire

semester. These courses are also calibrated with the concurrent design studio, **A4003 Core Studio III**, where students draw upon knowledge and skills developed throughout the breadth of the design studio and technology courses to gain the ability to use analytical skills and technical knowledge in approaching, reframing and informing design solutions.

In **A4002 Core Studio II** integrative thinking is introduced through the careful consideration of site, program, and the technical and structural demands of an institutional building—a school, library or bank. The students' work progresses through a series of distinct design assignments that synthesize the knowledge accumulated in their technology classes to produce a cohesive design proposal. Students are encouraged to integrate into their design process the principles of passive heating/cooling building systems that are introduced in the technology course, **A4111 ATI Environments in Architecture**. To demonstrate this knowledge, students produce an isometric cut-away drawing that explores both the spatial and environmental impact of their design between the exterior and interior spaces. Core Studio II is specifically geared towards exploring the spatial capacities of structural systems while giving technical attention to the material deployed, its efficiency, and its carbon footprint. Students meet with structural engineers to develop the structural logics of their projects. In addition to drawing diagrams, students are required to incorporate structural details within a large-scale, isometric cut-away drawing and often develop models that demonstrate their structural system's ability to withstand gravitational and lateral forces. Core Studio II is closely coordinated in scope and material with the simultaneous technology course **A4112 ATII Structures in Architecture**, which introduces students to structural systems and materials, fabrication, and assembly, as well as structural calculation and computation. Students are expected to understand structure as a fundamental ordering system for their designs.

In **A4114 ATIV Building Systems Integration**, students develop a comprehensive design-oriented project that integrates multiple systems. The course brings together key topics that were introduced in the first-year technology courses, such as: life-safety, fire protection, environmental systems, and structures. This knowledge is now applied at the architectural scale in a comprehensive exercise centered on the design of a flexible theater building in Brooklyn. Students develop a comprehensive design analysis and produce a construction document set for their building. The course shares the integrated building project with the concurrent technology course **A4113 ATIII Envelopes**, which focuses on developing knowledge and skills of facade and enclosure systems. **A4114 ATIV Building Systems Integration** is formatted to emulate the structure of a design studio. Students meet on a weekly basis with a team of consultants and critics (structural engineers, mechanical consultants, and enclosure specialists), who are understood as active collaborators in the design process. In this course, technical knowledge is no longer delegated to the engineer, but rather understood as the responsibility of the architect: a tool to own and challenge in architectural design.

In addition to thinking about integration at the building scale, **AT4115 ATV Urban Systems Integration** in the following semester extends integrative design thinking to the urban scale. Students address the broader scales of integration within the building—exploring scarcity of resources, energy and its efficient performance, water recycling and water use—and seek to engage with the realities of rapid population growth and climate change. Within the course, students engage in a semester-long technical design project, an urban campus in the metropolitan New York area, which results in a comprehensive drawing set.

**A4003 Core Studio III** takes integrative thinking to a higher level of complexity within the design studio by preparing students to actively participate in and challenge their approaches to building systems integration. In the design of affordable housing projects, students must consider multiple variables such as site, context, and existing typology combined with structure, building envelopes, and basic building systems. At this point in the M.Arch curriculum, students are expected to begin to seamlessly incorporate knowledge acquired in their technical courses into their design work. The overlap in both structure and

content between design studios and the technology courses during the third semester, at the exact midpoint of the overall curriculum, reinforces the School's overall philosophy towards integrative design as a collaborative and comprehensive synthesis of a diversity of technical and design factors.

Students produce drawings and models that demonstrate an understanding of structure, illustrating proper structural framework and footings (structural diagrams and sections); an understanding and proper representation of facade construction and material assemblies; and an understanding of building infrastructure such as water usage and circulation. Students are also expected to demonstrate their understanding of these systems by challenging many of them in their design work. In the interest of generating new design avenues for high-density housing typologies and addressing questions of climate change, many take on and re-conceptualize one or several of these systems (water harvesting, thermal mass and energy efficiency, wood structure, etc.) through their design processes.

## **Realm D: Professional Practice**

### **D.1 Stakeholder Roles in Architecture:**

Understanding of the relationships among key stakeholders in the design process—client, contractor, architect, user groups, local community—and the architect's role to reconcile stakeholder needs.

The required course **A4560 Professional Practice: Turning Design into Buildings** demonstrates understanding of this criterion. The course consists of lectures about the relationship between various stakeholders in the design and building process, from the most procedural (client, contractor, and architect) to the most broad (user groups, and local communities). Agreements and general conditions (AIA B101 and A101/201) are covered as well as the architect's role in reconciling the sometimes disparate (and even opposing) needs and goals of clients, owners, and users with those of the community and society. Negotiating architecture's key stakeholders is covered in *Professional Practice: A Guide to Turning Designs into Buildings* (W.W. Norton, 2006), written by Adjunct Professor Paul Segal, which is a required text at the School and at many other schools throughout the country. This knowledge is evaluated in active class participation and discussion, weekly small assignments, and in a final exam at the end of the course.

With increasing engagement of faculty and students with contemporary issues, especially in the context of New York City in the core studios, the negotiation of client needs, user groups, and constituencies vis-a-vis the studio project are also increasingly part of the studio pedagogy. For example, in **A4003 Core Studio III**, students design affordable housing for a particular constituency in an underserved area of New York City. Often, community members, advocates, and city agencies play a role throughout the semester, either in guest lectures at the beginning of the semester, or by sitting on the final jury review.

### **D.2 Project Management:**

Understanding of the methods for selecting consultants and assembling teams; identifying work plans, project schedules, and time requirements; and recommending project delivery methods.

**A4560 Professional Practice: Turning Design into Buildings** demonstrates understanding of this criterion. Methods of assembling and coordinating a team to obtain the most appropriate and beneficial services for the client are covered in a series of lectures. This includes selecting consultants and establishing consultant employers. Identifying appropriate work plans, project schedules, and time requirements, as well as the architect's role in each phase of the project is addressed in depth. Project delivery methods, service contracts (including AIA Documents), construction documents, project

management, and budgeting are covered. Alternate project delivery methods—such as design-bid-build, design-build, and other combinations of the usually separate parties, with pros and cons of each—are also considered throughout the course. This knowledge is evaluated in active class participation and discussion, weekly small assignments, and in a final exam at the end of the course.

Apart from the knowledge acquired in this required course, students also get in-depth exposure to this criterion by working directly with professional consultants in the building science and technology sequence, especially in **A4114 AT IV Building Systems Integration** and **A4115 AT V Urban Systems Integration**, where they meet on a weekly basis to work through the schematic, design development and construction documents phases of a project with a group of consultants (structural engineers, MEP, and envelope specialists).

### **D.3 Business Practices:**

Understanding of the basic principles of a firm's business practices, including financial management and business planning, marketing, organization, and entrepreneurship.

The required course **A4560 Professional Practice: Turning Design into Buildings** demonstrates understanding of this criterion. Understanding of the basic principles of office organization, business planning, marketing, financial management, and entrepreneurship as they apply to the practice of architecture are discussed in a series of lectures. Financial management and issues of fees, time, and costs within the discipline are covered—alongside elements of risk and methods of risk mitigation and transfer, including discussions about professional liability insurance, reinsurance, and factors affecting premiums. Dispute resolution methods and their implications are also outlined with real-life examples given for each topic. This knowledge is evaluated in active class participation and discussion, weekly small assignments, and in a final exam at the end of the course.

Many of the public events held at GSAPP are designed to inform students about the conditions of professional practice. Prominent architects from the United States discuss their experiences with the practical issues in local and global practice, and architects from outside the United States are invited to discuss different modes of practice. For example, the “Transfer Dialogues” lecture series (2015–2018) and now the “Constructing (Engaged) Practices” symposium trace the narratives of young firms from around the globe who are critically engaged in political, technological, intellectual, and environmental conflicts. These events featured case studies and dialogues on designing, establishing, and maintaining a practice in today's often contradictory climate.

Lastly, GSAPP is committed to supporting entrepreneurship opportunities for its M.Arch students as they enter the professional world. In 2019, the GSAPP Incubator transitioned from its tenancy at NEW INC to a generous Incubator Prize award of \$10,000. With the same mission to help the development of innovative alumni-led projects, the award continues to advance domestic and international projects dedicated to critical modes of practice that engage the challenges and opportunities facing the built environment today.

### **D.4 Legal Responsibilities:**

Understanding of the architect's responsibility to the public and the client as determined by regulations and legal considerations involving the practice of architecture and professional service contracts.

The required course **A4560 Professional Practice: Turning Design into Buildings** demonstrates understanding of this criterion. Methods of incurring legal obligations by statute, by contract, and by common law are discussed in a series of lectures. The course also covers at length the range of governmental control for public safety, health, and welfare. Title and practice issues of licensing and state

laws, ARE, and AXP are discussed. Building codes, performance, prescriptive zoning regulations, deriving from NYC's 1916 response to the construction of the Equitable Building, subdivision regulations, historic preservation laws, and private covenants are discussed. Articles of professional service contracts which outline the legal responsibilities of each party, owner/architect (AIA B101) and owner/contractor (AIA A101) agreements are covered in detail. This knowledge is evaluated in active class participation and discussion, weekly small assignments, and in a final exam at the end of the course.

Although the architect's responsibilities in these areas are outlined and discussed in the Professional Practice course, legal responsibilities are also introduced in the context of the design studios and technical course projects. For example, codes and regulations (including zoning) are addressed in the required design studios **A4002 Core Studio II** and **A4003 Core Studio III**. Technical codes are also covered in the Building Science and Technology Sequence in **A4114 ATIV Building Systems Integration**.

#### **D.5 Professional Conduct:**

Understanding of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.

The required course **A4560 Professional Practice: Turning Design into Buildings** demonstrates understanding of this criterion. A full range of moral, ethical, legal, and practical practice-related issues within architecture design are covered in a series of lectures. Problems are posed, discussed, and debated. High ethical standards and fairness in practice are emphasized to produce better projects and more successful practices through examples. The role of the NCARB Rules of Conduct and the AIA Code of Ethics are offered as continuing resources that define ethical conduct for students as they enter the professional world. This knowledge is evaluated in active class participation and discussion, weekly small assignments, and in a final exam at the end of the course.

In addition to being met in the Professional Practice course, this criterion is also a central theme of the curriculum across design studios, History and Theory classes and Visual Studies electives. For example, issues of ethical judgment in process and management are often discussed in the design studios, where nearly all of the design faculty run their own architectural practices and address these issues on a day-to-day basis. As all students travel with their faculty in their final advanced studio to different local and global locations, the ethical responsibility of the profession is again foregrounded in terms of diversity of cultural norms, economic disparity, and different political systems. The responsibility of the architect to make balanced judgements in the face of complex competing demands is highlighted. Issues of energy responsibility, historic preservation, and public space are likewise understood in ethical terms. Summer workshops, which GSAPP M.Arch students have access to after their second year, are often sited in highly-charged contexts where students are challenged to reimagine the role of the architect in terms of ethical responsibility.

The increasing need at GSAPP to engage with the practical challenges and contested dimensions of the contemporary world—and the role of the architect within these dimensions—has led to an ongoing reflection on the ethics of the profession, particularly when the built environment sits at the heart of every challenge and opportunity facing the planet today, from climate change's total recasting of the foundations of architecture to the radical transformations that data and technology are affecting across country and city, from the alarming shortage of affordable housing to the increasing migration of people across national boundaries.

### **II.2.1 Institutional Accreditation**

Columbia University has been accredited by the Middle States Commission on Higher Education since 1921. The University underwent its decennial accreditation during the 2015–2016 academic year, and was re-accredited for the maximum allowable period of 8–10 years.

Below is a copy of the latest accreditation letter. Our regional accreditation can also be verified online here: <https://www.msche.org/institution/0298>.

Middle States Commission on Higher Education Accreditation Letter (2015–2016)  
(page 1 of 4)



June 24, 2016

Mr. Lee C. Bollinger  
President  
Columbia University  
2960 Broadway  
New York, NY 10027

Dear President Bollinger:

At its session on June 23, 2016, the Middle States Commission on Higher Education acted:

To reaffirm accreditation and to commend the institution for the quality of the self-study process and report. The date for the next accreditation review will be determined by the Commission when it revises the accreditation cycle.

This action is an affirming action, as explained in the policy *Accreditation Actions*, which is available on the Commission's website.

Enclosed is a copy of the institution's Statement of Accreditation Status (SAS) for your review. If any of the factual information is incorrect, please contact the Commission as soon as possible.

In accordance with the policy *Advertising, Student Recruitment, and Representation of Accredited Status*, the accreditation status of the institution must be accurately represented. Please ensure that published references to your institution's candidate status or accredited status (catalog, other publications, web page) are accurate and include the full name, address, and telephone number of the accrediting agency, and the effective date (month and year) when status was granted. Candidate for Accreditation is a status with the Commission that indicates that an institution has achieved membership and is progressing toward, but is not assured of, accreditation.

Please be assured of the continuing interest of the Middle States Commission on Higher Education in the well-being of Columbia University. If any further clarification is needed regarding the SAS or other items in this letter, please feel free to contact Dr. Christy L. Faison, Vice President.

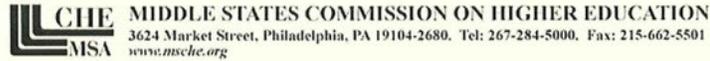
Sincerely,

A handwritten signature in black ink, appearing to read "George A. Pruitt", written over a horizontal line.

George A. Pruitt, Ph.D.  
Chair

The Middle States Commission on Higher Education accredits institutions of higher education in Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Puerto Rico, the U.S. Virgin Islands, and other locations abroad.

Middle States Commission on Higher Education Accreditation Letter (2015–2016)  
(page 2 of 4)



STATEMENT OF ACCREDITATION STATUS

COLUMBIA UNIVERSITY  
2960 Broadway  
New York, NY 10027  
Phone: (212) 854-1754; Fax: (212) 865-8670  
www.columbia.edu

Chief Executive Officer: Mr. Lee C. Bollinger, President

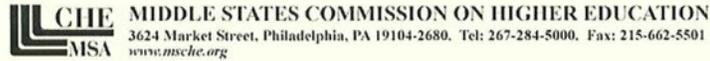
INSTITUTIONAL INFORMATION

Enrollment (Headcount): 9537 Undergraduate ; 20907 Graduate  
Control: Private (Non-Profit)  
Affiliation: None  
2015 Carnegie Classification: Doctoral Universities - Highest Research Activity  
Approved Degree Levels: Bachelor's, Postbaccalaureate Award/Cert/Diploma, Master's, Post-Master's Award/Cert/Diploma, Doctor's - Professional Practice, Doctor's - Research/Scholarship;  
Distance Education Programs: Fully Approved

Accreditors Recognized by U.S. Secretary of Education: Accreditation Commission for Midwifery Education ; American Bar Association, Council of the Section of Legal Education and Admissions to the Bar ; American Dental Association, Commission on Dental Accreditation ; American Occupational Therapy Association, Accreditation Council for Occupational Therapy Education ; American Physical Therapy Association, Commission on Accreditation in Physical Therapy Education ; Commission on Collegiate Nursing Education ; Council on Accreditation of Nurse Anesthesia Educational Programs ; Council on Education for Public Health ; Liaison Committee on Medical Education

Other Accreditors: Accreditation Board of Engineering and Technology; Accrediting Council on Education in Journalism and Mass Communication; American Nurses Credentialing Center's Commission on Accreditation; Association to Advance Collegiate Schools of Business; Commission on Accreditation of Healthcare Management Education; Commission on Accreditation of Medical Physics Educational Programs, Inc.; Commission on Peer Review and Accreditation, Network of Schools of Public Policy, Affairs, and Administration; Council on Social Work Education; National Architectural Accreditation Board; Pediatric Nursing Certification Board; Planning Accreditation Board

Middle States Commission on Higher Education Accreditation Letter (2015–2016)  
(page 3 of 4)



STATEMENT OF ACCREDITATION STATUS

COLUMBIA UNIVERSITY  
2960 Broadway  
New York, NY 10027  
Phone: (212) 854-1754; Fax: (212) 865-8670  
www.columbia.edu

Chief Executive Officer: Mr. Lee C. Bollinger, President

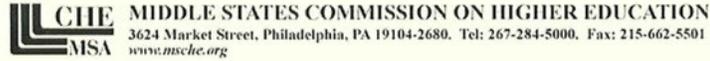
INSTITUTIONAL INFORMATION

**Enrollment (Headcount):** 9537 Undergraduate ; 20907 Graduate  
**Control:** Private (Non-Profit)  
**Affiliation:** None  
**2015 Carnegie Classification:** Doctoral Universities - Highest Research Activity  
**Approved Degree Levels:** Bachelor's, Postbaccalaureate Award/Cert/Diploma, Master's, Post-Master's Award/Cert/Diploma, Doctor's - Professional Practice, Doctor's - Research/Scholarship;  
**Distance Education Programs:** Fully Approved

**Accreditors Recognized by U.S. Secretary of Education:** Accreditation Commission for Midwifery Education ; American Bar Association, Council of the Section of Legal Education and Admissions to the Bar ; American Dental Association, Commission on Dental Accreditation ; American Occupational Therapy Association, Accreditation Council for Occupational Therapy Education ; American Physical Therapy Association, Commission on Accreditation in Physical Therapy Education ; Commission on Collegiate Nursing Education ; Council on Accreditation of Nurse Anesthesia Educational Programs ; Council on Education for Public Health ; Liaison Committee on Medical Education

**Other Accreditors:** Accreditation Board of Engineering and Technology; Accrediting Council on Education in Journalism and Mass Communication; American Nurses Credentialing Center's Commission on Accreditation; Association to Advance Collegiate Schools of Business; Commission on Accreditation of Healthcare Management Education; Commission on Accreditation of Medical Physics Educational Programs, Inc.; Commission on Peer Review and Accreditation, Network of Schools of Public Policy, Affairs, and Administration; Council on Social Work Education; National Architectural Accreditation Board; Pediatric Nursing Certification Board; Planning Accreditation Board

Middle States Commission on Higher Education Accreditation Letter (2015–2016)  
(page 4 of 4)



STATEMENT OF ACCREDITATION STATUS

COLUMBIA UNIVERSITY  
2960 Broadway  
New York, NY 10027  
Phone: (212) 854-1754; Fax: (212) 865-8670  
www.columbia.edu

Chief Executive Officer: Mr. Lee C. Bollinger, President

INSTITUTIONAL INFORMATION

**Enrollment (Headcount):** 9537 Undergraduate ; 20907 Graduate  
**Control:** Private (Non-Profit)  
**Affiliation:** None  
**2015 Carnegie Classification:** Doctoral Universities - Highest Research Activity  
**Approved Degree Levels:** Bachelor's, Postbaccalaureate Award/Cert/Diploma, Master's, Post-Master's Award/Cert/Diploma, Doctor's - Professional Practice, Doctor's - Research/Scholarship;  
**Distance Education Programs:** Fully Approved

**Accreditors Recognized by U.S. Secretary of Education:** Accreditation Commission for Midwifery Education ; American Bar Association, Council of the Section of Legal Education and Admissions to the Bar ; American Dental Association, Commission on Dental Accreditation ; American Occupational Therapy Association, Accreditation Council for Occupational Therapy Education ; American Physical Therapy Association, Commission on Accreditation in Physical Therapy Education ; Commission on Collegiate Nursing Education ; Council on Accreditation of Nurse Anesthesia Educational Programs ; Council on Education for Public Health ; Liaison Committee on Medical Education

**Other Accreditors:** Accreditation Board of Engineering and Technology; Accrediting Council on Education in Journalism and Mass Communication; American Nurses Credentialing Center's Commission on Accreditation; Association to Advance Collegiate Schools of Business; Commission on Accreditation of Healthcare Management Education; Commission on Accreditation of Medical Physics Educational Programs, Inc.; Commission on Peer Review and Accreditation, Network of Schools of Public Policy, Affairs, and Administration; Council on Social Work Education; National Architectural Accreditation Board; Pediatric Nursing Certification Board; Planning Accreditation Board

**II.2.2. Professional Degrees and Curriculum**

**A. Master of Architecture (non pre-professional degree plus, 108 credits)**

The Columbia University Graduate School of Architecture, Planning and Preservation offers a three-year Master of Architecture (M.Arch) degree. All applicants must have an undergraduate degree from an accredited college or university by the time they start the M.Arch program. Prior architectural study is not a requirement. To qualify for graduation with the M.Arch degree, students with no prior architectural education are required to take 54 class points of design studio, 18 points of history and theory, 18 points of building science and technology, 6 points of visual studies, 6 points of methods and practice, and 6 points of elective and optional studies. Students entering the program upon completion of a college level, non-professional architectural degree or related degree may receive advanced standing for some course work. A total of 108 points is required of all students graduating from the M.Arch program.

**Table 1. Credit Distribution**

	<b>M. Arch (non pre-professional plus)</b>
<b>General Studies</b>	Defined by baccalaureate required for admission. Minimum 45 credits which include specified prerequisites (see below)
<b>Optional Studies (Electives)</b>	As defined by the program (see below)
<b>Professional Studies</b>	As defined by the program (see below)
<b>Undergraduate Credits</b>	As defined by baccalaureate required for admission
<b>Graduate Credits</b>	108
<b>Total Credits</b>	168

**i. STEM-Designation**

The Classification of Instructional Program (CIP) Code was developed by the United States Department of Education’s National Center for Education Statistics to provide a national taxonomic standard to accurately track and report fields of study. In August 2016 the M.Arch program became STEM (Science, Technology, Engineering, and Math) eligible under the CIP Code 04.0902: Architectural and Building Sciences/Technology. This new CIP Code acknowledges that the program includes instruction across building technology, civil and structural engineering, mechanical engineering, environmental control systems, sustainability, and computer tools and applications—expanding the scope of their respective curriculums to keep pace with contemporary changes and new directions in the field of architecture and the built environment. For example, the M.Arch program has advanced a specialized architectural practice that joins design, technology, visualization, and building sciences in its interrogation of buildings, cities, and regions.

**B. M. Arch Curriculum Structure by Category of Study**

To graduate with a M.Arch degree, a student is required to have 108 graduate-level course points approved by GSAPP. These course points are a combination of required courses, a certain number of points of distribution course requirements, and elective course points. The courses are divided into the following sequences: Design Studio, History and Theory, Building Science and Technology, Visual Studies, Methods and Practice, and Electives and Optional Studies. Each category (except Electives and Optional Electives) has requirement courses that must be filled. See the following tables.

Courses listed in the tables include the two previous academic years (2018–2019, 2019–2020) and the past semester in the current academic year (2020–2021). The required Course Descriptions for this time period are found in Section 4 of this report: Supplemental Material.

**Design Studio Sequence**

Core Studios Director, Core III Coordinator: Hilary Sample

Advanced Studios Co-Directors/Advanced Studios V and VI Coordinators: David Benjamin and Mario Gooden

Core Studio I Coordinator: Ana Puigjaner

Core Studio II Coordinator: Erica Goetz

Advanced Studio IV Coordinator: Ziad Jamaledine

The Design Studio Sequence curriculum is the focus of the M.Arch program. The sequence consists of six sequential studios that meet for up to twelve hours a week and are primarily project-based, consisting of one-on-one interactions between students and faculty. Through a process of continuous iteration, discussion, experimentation, and feedback, students practice integrating an infinite number of variables into a coherent concept and project, which proposes an intervention into the built environment.

The Design Studio Sequence is divided between Core Studios and Advanced Studios. The Core Studios consists of the first three semesters. It is structured to build knowledge on the fundamentals of architectural design through the theme of “Architecture and the City” and through an inclusive and expansive understanding of history, cities, typology, and performance. Core Studio I focuses on acquiring analytical and drawing skills addressing the city from the urban to the detail; Core Studio II tackles the design of an institutional building within the city; and Core Studio III concludes the sequence with the Housing Studio focusing on the design of collective, social housing for a specific constituency.

Advanced Studios consists of the last three semesters, with the last two composed of eighteen studios that together explore new instruments, techniques, and formats of design across a multiplicity of existing realities. The studios function as laboratories for discussion, where students and critics practice new ways of mobilizing architectural concepts, programs, tools, and methods to intervene on specific layers of the everyday. After focusing on the problem of architectural practice and its agency in the world, the sequence now focuses on “Architecture and Environment” as a fundamental question for the field.

A. Studio requirements for M.Arch program

Six sequential studios starting in the Fall term of the first year:

A4001 Core Studio I	9 pts
A4002 Core Studio II	9 pts
A4003 Core Studio III	9 pts

A4004 Advanced Studio IV	9 pts
A4005 Advanced Studio V	9 pts
A4006 Advanced Studio VI	9 pts
Total:	54 pts

### **History and Theory Sequence**

Director: Reinhold Martin

The History and Theory Sequence curriculum stresses a broad social and cultural approach to architectural history, with particular attention to emerging global concerns. Architectural history is seen in terms of a rich matrix of parameters—political, economic, artistic, technological, and discursive—that have had a role in shaping the discipline. The sequence consists of two required courses and four distribution courses. In general, the M.Arch History and Theory Sequence curriculum aims to introduce students to a range of subjects broadly distributed in both space (geography) and time (chronology). Students are encouraged to think and work across categorical East-West and North-South distinctions and the asymmetries these binaries often reproduce, and to consider both continuity and change across 1800 as the threshold that marks the end of the European Enlightenment and the beginning of worldwide industrialization.

The required history courses take place over the first two semesters and cover the history of architectural modernity from the start of the Enlightenment to the twentieth century. The courses are organized around selected questions and problems that have, over the course of the past two centuries, helped to define architecture's modernity.

The distribution course offerings are structured to provide each student with an opportunity to gain both a broad general background in architecture history and a degree of specialized knowledge in areas of his or her selection. Select classes in the Department of Art History and Archaeology may supplement the architecture history classes within the School.

#### A. Prerequisite for entry into M.Arch program

Any 3-point course in the history of architecture is required for entry. A broad survey of world architecture is especially recommended.

#### B. History/Theory requirements for M.Arch program

Two sequential courses:

A4348 Questions in Architectural History I	3 pts
A4349 Questions in Architectural History II	3 pts
Total:	6 pts

#### C. History/Theory distribution requirements for M.Arch. program

Four distribution courses Total: 12 pts

##### C.1. For M.Arch students entering GSAPP in or after Fall 2019

As a matter of convention, all relevant course offerings are assigned chronological and geographical coordinates: Pre-1800, Post-1800; North or West (N/W), South or East (S/E). Each of the four courses

must be chosen from a different category, as follows: (1) Pre-1800 (either N/W, S/E, or both), (2) Post-1800 N/W, (3) Post-1800 S/E, (4) Open History and Theory Elective (Pre- or Post-1800; N/W, S/E, or both).

Students are expected to combine breadth in fields they have not previously studied with in-depth seminars in at least one of these categories. Each term course schedule will identify those courses fulfilling the distribution requirements. If a student has previously taken a similar graduate-level course or two advanced undergraduate-level courses in the same area, he or she may petition the Director of History and Theory to waive a requirement.

C.2. For M.Arch students who entered GSAPP in Fall 2018 or earlier

Of those four courses, one course must be Pre-1750 and one course must be Non-Western, unless waivers are granted. The remaining two courses must be chosen from two of the following three categories (students may not take two courses in the same category toward the requirement): (1) Modern: 1750 to the Present, (2) Urban Society, (3) American.

Students are expected to combine breadth in those fields they have not previously studied with in-depth seminars in at least one of these categories. Each term course schedule will identify those courses fulfilling the distribution requirements. If a student has previously taken a similar graduate-level course or two advanced undergraduate-level courses in the same area, he or she may petition the Director of History and Theory to waive a requirement.

A4326	Architectural Visualization Since 1900	3 pts
A4332	European Urban Cartography Sixteenth Century	3 pts
A4337	Politics of Space: Cities, Institutions, Events	3 pts
A4341	Modern American Architecture	3 pts
A4353	Le Corbusier	3 pts
A4374	Theoretical Turn in Architecture	3 pts
A4385	Arab Modernism(s): Experiments in Housing, 1945–Present	3 pts
A4388	Plastic Modernity	3 pts
A4390	Greats: China’s Big Projects	3 pts
A4399	Metropolitan Sublimes	3 pts
A4429	Studies in Tectonic Culture	3 pts
A4469	The History of Architecture Theory	3 pts
A4504	Spectacular Pedagogies	3 pts
A4540	Essays on Architecture (Also A6794)	3 pts
A4552	Dark Space: Architecture Representation and Black Identity	3 pts
A4566	Collecting Architecture Territories	3 pts
A4597	Extreme Design	3 pts
A4618	Architecture: The Contemporary	3 pts
A4620	Building China	3 pts
A4620	China 1368–1912: Shifting Structures of the Ming and Qing	3 pts
A4678	Designing for Zero: Housing, Mobility, Energy	3 pts
A4688	Recombinant Urbanism	3 pts
A4694	Reading Buildings, Writing Buildings	3 pts
A4780	Architecture and Human Rights	3 pts
A4804	Program (Practices)	3 pts
A4866	Modernism and the Vernacular	3 pts

A4890	Conflict Urbanism	3 pts
A4915	The Gothic: From the Sublime to the Uncanny	3 pts
A6448	Program (Theories)	3 pts
A6451	Recombinant Renaissance	3 pts
A6455	Military Urbanism in the Early Modern Era	3 pts
A6460	Architecture and Ethics in the Post-Trust Era	3 pts
A6769	Histories of American Cities	3 pts
A6770	The Arts of Empire: Early Modern England	3 pts
A6785	Theory of City Form	3 pts
A6797	Mapping Borderlands	3 pts
A6801	Structural Daring and The Sublime	3 pts
A6806	Building Islam: A Brief History of the Mosque and Other Structures	3 pts
A6813	Reading Precisions: Reconstructing Latin America's Le Corbusier	3 pts
A6813	Ephemeral Architectures and Falsified Cities: Latin America	3 pts
A6814	New Towns to Smart Cities	3 pts
A6815	Out of Date: Expired Patents and Their Unrealized Histories	3 pts
A6815	Public Space: Rhetorics of the Pedestrian	3 pts
A6826	African Cities	3 pts
A6837	Fabrics and Typologies: NY/Global	3 pts
A6840	Archives of Toxicity	3 pts
A6843	Theories of Feminist Architecture	3 pts
A6844	A Social and Architectural History of Jerusalem	3 pts
A6846	South East Asia and Post Colonialism	3 pts
A6858	Open Work	3 pts
A6861	The Architecture of Coal Country	3 pts
A6861	Environments of Governance: Architecture, Media, Development	3 pts
A6867	Babel	3 pts
A6869	Nature, Infrastructure, and the Making of South Asia	3 pts
A6872	Feminist Perspectives on Architectural Practice	3 pts
A6875	Architecture and Development	3 pts
A6877	Feasting and Fasting	3 pts
A6878	Architecture and Settler Colonialism	3 pts
A6881	Structuralism and Critics	3 pts
A6885	Architecture, Engineering, and Political Ecology	3 pts
A6896	Nationalism	3 pts
A6898	Architecture, Building, and Labor	3 pts

### **Building Science and Technology Sequence**

Director: Lola Ben Alon

The Building Science and Technology Sequence curriculum is founded on the belief that the realities of building technology are integral to design exploration and experimentation, especially as computational power and data have become ubiquitous, and changes in manufacturing, materials, and information technologies are shaping new modes of thinking and making. Recognizing how performance—its measurement and verification—has become not only a primary function of architectural “solutions,” but also a generator of architectural concepts, the sequence aims to encourage critical and creative approaches to data and measurement and the discovery of new design opportunities and paradigms.

The sequence consists of five required architectural technology courses and one technology elective. The sequence begins by introducing basic building physics and key building systems such as energy demand for heating/cooling, thermal comfort, life safety, fire protection, structure and enclosures. For each system studied, various design strategies, materials, fabrication techniques, and computational analysis are explored through a series of exercises and case studies. As both qualitative and basic quantitative concepts are mastered, the curriculum shifts its focus to integrating complex systems serving entire buildings. The required sequence's last three courses (A4113 Architectural Technology III in tandem with A4114 Architectural Technology IV in the fall and A4115 Architectural Technology V in the spring) concentrate on how these systems are detailed, interact with each other, and inform a building's spaces in a comprehensive integration design project at both the building and urban scale.

A. Prerequisite for entry into M.Arch program

Any 3-point course in general physics or two 3-point courses in calculus

B. Technology requirements for M.Arch program

Six sequential courses:

A4111 AT1 Environments in Architecture	3 pts
A4112 AT2 Structures in Architecture	3 pts
A4113 AT3 Envelopes	3 pts
A4114 AT4 Building Systems Integration	3 pts
A4115 AT5 Urban Systems Integration	3 pts
Building Science and Technology Elective	3 pts
<b>Total:</b>	<b>18 pts</b>

C. Technology electives for M.Arch program

Electives are open to all students in the School, subject to the prerequisites listed in the course descriptions. Students waived out of ATI; ATII; ATIII; ATIV; or ATV, must take an advanced elective course for each waived course.

A4124 Modern Building Technology	3 pts
A4337 Politics of Space: Cities, Institutions, Events	3 pts
A4444 Facade Detailing: A Material Understanding	3 pts
A4625 Tensile/Compression Surfaces in Architecture	3 pts
A4628 Acoustics	3 pts
A4634 Advanced Curtain Wall	3 pts
A4635 Architectural Daylighting	3 pts
A4684 Sustainable Design	3 pts
A4701 Innovation, Technology and Architecture	3 pts
A4715 Re-Thinking BIM	3 pts
A4776 Man, Machine and the Industrial Landscape:	3 pts
A4800 Material Things	3 pts
A4815 X Information Modeling I	3 pts
A4824 Transformable Design Methods	3 pts

A4829 X Information Modeling II	3 pts
A4845 Generative Design	3 pts
A4846 Super-Tall	3 pts
A4856 Transitional Geometries	3 pts
A4859 Pre-Fab and Modular Arch Research Seminar	3 pts
A4861 Footprint: Carbon and Design	3 pts
A4863 Cross-Species Test Sites	3 pts
A4867 History, in the Making	3 pts
A4870 Modular Autonomy	3 pts
A6708 Sustainable Retrofits	3 pts
A6768 Conservation of Architectural Metals	3 pts
A6786 Conservation of Concrete, Cast Stone and Mortar	3 pts
A6857 Measuring the Great Indoors	3 pts
A6934 Traditional Building Technology	3 pts

**Visual Studies Sequence**

Director: Laura Kurgan

The Visual Studies Sequence curriculum registers how the visual has multiplied exponentially, especially by way of computation, and invites students and faculty to rethink how it intersects with design, pedagogy, and practice. The sequence consists of one required course and one full or two half semester visual studies electives. In the required drawing and representation course, through a careful survey of drawing's new temporal nature, students discover methods to harness the potential of drawing, engage with today's visual diversity, and communicate extraordinary visions.

The sequence offers a wide range of electives that introduce tools and techniques designed to expose students to the potentials and limits of these tools. Electives are divided into three broad sets of classes: analysis/representation, design environments, and fabrication. This variety of possible trajectories promotes individual approaches to visualization and fosters invention.

A. Prerequisite for entry into M.Arch program

Any course in architectural graphic presentation (this could be one term of architectural studio or a studio in the visual arts such as drawing, painting, or sculpture) as a prerequisite for students without prior architecture experience.

B. Visual Studies requirements for M.Arch program

Two courses:

A4024 Architectural Drawing and Representation II	3 pts
Visual Studies Elective	3 pts
	Total: 6 pts
A4063 Points Unknown: Cartographic Narratives	3 pts
A4122 Mapping For Architecture Urbanism and Humanities	3 pts
A4507 NYC: Typological Corrections of "Living Together"	3 pts
A4534 Techniques of the Ultrareal	3 pts

A4535	Fundamentals of Digital Design	3 pts
A4612	Architectural Photography	3 pts
A4715	Re-Thinking BIM	3 pts
A4716	Graphic Architecture Project I: Design and Typography	3 pts
A4726	Graphic Architecture Project III: Design Seminar	3 pts
A4778	Metatool I	1.5 pts
A4808	Metatool II	1.5 pts
A4814	Hacking the Urban Experience	1.5 pts
A4832	Lines Not Splines: Drawing as Invention	3 pts
A4834	Data Mining the City I	1.5 pts
A4836	Data Mining the City II	1.5 pts
A4841	Urbanisms and Algorithms I	3 pts
A4845	Generative Design I	3 pts
A4847	Hacking the Urban Experience II	1.5 pts
A4892	Data Visualization for Architecture, Urbanism and the Humanities	3 pts
A4894	User-Centered Design	3 pts
A4945	Play	3 pts
A4951	Composite Modeling	3 pts
A4968	Tools For Show: Ready For Replicas	1.5 pts
A4969	Tools For Show: Potent Prototypes	1.5 pts
A4970	Never Built Paris	3 pts
A4975	Seminar of Section	3 pts
A4980	Virtual Architecture: World Building and Virtual Reality Workshop	3 pts
A4985	Listening Exercises	3 pts
A4987	Architectural Photography: From the Models to the Built World	3 pts
A4989	Realtime	3 pts
A6756	Make	3 pts
A6783	Narrative Urbanism: Strategic Storytelling	3 pts
A6883	Public Interest Technology: Cities, Design, Code Reporting	3 pts
PLA4577	Geographic Information Systems (GIS)	3 pts

### **Methods and Practice Sequence**

The Methods and Practice Sequence curriculum introduces the student to various aspects of professional practice including the use of digital drafting/3D-modelling and design software, fabrication methods, project and office management, developmental processes, legal and planning regulation, etc. These serve as an introduction to areas to be further developed during the three-year apprenticeship period (following completion of the M.Arch program) required for professional licensing.

#### A. Prerequisite for entry into M.Arch program

None

B. Methods/Practice requirements for M.Arch program

A4023 Architectural Drawing and Representation I	3 pts
A4560 Professional Practice	3 pts
<b>Total:</b>	<b>6 pts</b>

**Elective and Optional Studies Sequence**

Students are required to select two electives as part of their M.Arch degree. All sequences, other than the Design Studio Sequence, offer elective courses. Each semester, GSAPP offers a full range of interdisciplinary courses that are open all students within the School. In addition, courses offered by the Urban Planning, Historic Preservation, or Real Estate programs when taken as electives may be applied toward completion of the M.Arch degree.

In 2021, the GSAPP Anti-Racism Task Force recommended the development of a required 0 point cross-discipline orientation/course, Common Circle, with a focus on timely, anti-racist and related themes relevant to the built environment for all incoming students. The School plans to launch the course in the Fall 2021 semester.

Students may also choose courses from other schools and departments of the University for M.Arch elective credit. These courses should be directly related to the student’s professional program within the School, and these courses must be at the graduate level (course numbers 4000 and above). Exceptions may be granted only by the Dean or sequence directors. Approval for these courses must be obtained during the registration period for the semester during which they are to be taken and provided to the Office of Admissions.

A. Elective requirements for M.Arch program

Two Electives	Total: 6 pts
---------------	--------------

**C. M.Arch Curriculum Structure by Semester Credit Hour Load**

Courses for the M.Arch degree are listed to illustrate the minimum number of credit hours for each semester.

Semester 1 (Fall)

A4001 Core Studio I	9 pts
A4111 AT1 Environments in Architecture	3 pts
A4348 Questions in Architectural History I	3 pts
A4509 Architectural Drawing and Representation I	3 pts
<b>Total:</b>	<b>18 pts</b>

Term 2 (Spring)

A4002 Core Studio II	9 pts
A4112 AT2 Structures in Architecture	3 pts
A4511 Architectural Drawing and Representation II	3 pts
A4349 Questions in Architectural History II	3 pts
<b>Total:</b>	<b>18 pts</b>

Term 3 (Fall)	
A4003 Core Studio III	9 pts
A4113 AT3 Envelopes	3 pts
A4114 AT4 Building Systems Integration	3 pts
History and Theory Distribution	3 pts
<b>Total:</b>	<b>18 pts</b>
Term 4 (Spring)	
A4004 Advanced Studio IV	9 pts
A4115 AT5 Urban Systems Integration	3 pts
History and Theory Distribution	3 pts
Visual Studies Elective	3 pts
<b>Total:</b>	<b>18 pts</b>
Term 5 (Fall)	
A4005 Advanced Studio, V	9 pts
A4560 Professional practice	3 pts
Technology Elective	3 pts
History and Theory Distribution	3 pts
<b>Total:</b>	<b>18 pts</b>
Term 6 (Spring)	
A4006 Advanced Studio, VI	9 pts
History and Theory Distribution	3 pts
Elective/ Optional Studies	6 pts
<b>Total:</b>	<b>18 pts</b>

#### **D. Other Degree Programs**

GSAPP currently offers seven degree programs, three doctoral programs, and a range of dual degree opportunities: Master of Architecture (M.Arch); Master of Science in Advanced Architectural Design (Ms.AAD); Master of Science in Critical, Curatorial, and Conceptual Practices (Ms.CCCP); PhD in Architecture; Master of Science in Architecture and Urban Design (Ms.AUD); Master of Science in Urban Planning (Ms.UP); PhD in Urban Planning, Master of Science in Historic Preservation (Ms.HP); PhD in Historic Preservation; and Master of Science in Real Estate Development (Ms.RED). The school also offers one special certificate program and one non-degree, pre-professional program: New York–Paris and Introduction to Architecture (INTRO), respectively.

In 2021, GSAPP added a Master of Science Computational Design Practices (Ms.CDP) program that was approved by NYSED. The Ms.CDP is an interdisciplinary program in architecture and urbanism that foregrounds computational design as a key element in shaping architecture and the built environment across all scales of its design, planning and production. Courses will span the curriculum at GSAPP, forming bridges, networks, and collaborations around shared concerns and tackle the complex questions that arise when data meets design, space, and the built environment.

More information about GSAPP's Other Degree Programs can be found at:

<https://www.arch.columbia.edu/#menu>.

## **E. Dual Degrees**

There are currently seven dual degree programs within GSAPP: M.Arch + Ms.HP, M.Arch + Ms.UP, M.Arch + Ms.CCCP, M.Arch + Ms.RED, Ms.UP + Ms.HP, Ms.RED + Ms.UP, and Ms.RED + Ms.HP. GSAPP also offers five dual degree opportunities with other schools at Columbia University, drawing on the plethora of remarkable resources available on campus. Each of these programs leads to the award of two professional degrees: Ms.UP + Master of Business Administration (in conjunction with Columbia Business School), Ms.UP + Master of International Affairs (with Columbia School of International and Public Affairs), Ms.UP + Juris Doctor (with Columbia Law School), Ms.UP + Master of Science in Social Work (with Columbia School of Social Work), and Ms.UP + Master of Science in Public Health (with Columbia Mailman School of Public Health).

More information about Dual Degrees can be found at:  
<https://www.arch.columbia.edu/dual-degree-requirements>.

## **F. Joint Studios**

Joint Studios have been in place at the school for several years. They not only enable GSAPP students from different programs the chance to pursue studies together, but also enlist the design studio culture to expand the outcomes of working across disciplines. To date, the school has established four Joint Studios, which fulfill studio requirements for each program: Ms.HP + M.Arch, Ms.UP + M.Arch, Ms.UP + Ms.HP, and Ms.RED + M.Arch.

GSAPP's oldest Joint Studio, between historic preservation and architecture, started in fall 2008 to explore the possibilities of adaptive reuse through the study of monuments with international, cultural, and historical significance. Studios have investigated politically-sensitive modernist monuments in Amman, Brasilia, Chandigarh, London, and Oslo. The current iteration of the studio is jointly taught by Professor Jorge Otero-Pailos and Adjunct Associate Professor Mark Rakatansky.

The school's most recent Joint Studio is between urban planning and architecture. Launched in Spring 2018, the studio is led by Professor Richard Plunz and Ms.UP faculty and enlists architecture (fourth semester) and urban planning (second semester) students to speculate on cities around the world.

## **II.3 Evaluation of Preparatory/Pre-Professional Education**

### **A. Prerequisites and Requirements for Admission**

The M.Arch at Columbia University is designed to be a student's first professional degree in architecture; therefore, students who already hold a professional degree (such as the five-year B.Arch degree) are not eligible to apply to the program. Students who have studied architecture in non-professional programs (such as a four-year program in architecture) may apply, with the possibility of obtaining advanced standing for some course work. Prior architectural study is not a requirement. Regardless of prior experience, all students fill out the same application forms and send supporting materials (as described below). Applications and all supporting materials are due in the beginning of January. Students are admitted to the M.Arch program for the autumn term only. Students are expected to complete prerequisite requirements by the time of enrollment.

#### **i. Academic Preparation**

1. All applicants must have, at the time of first registration, an undergraduate degree from an accredited College or University. All applicants must have fulfilled a minimum of 45 credit hours of general studies in the arts, humanities and/or science at their undergraduate institution.
2. Applicants are required to take the Aptitude Test of the Graduate Record Examination. Information may be obtained from the Graduate Record Examination, Educational Testing Service, Box 955, Princeton, NJ 08540. In the 2021 admissions cycle, GSAPP is waiving the GRE requirement on master's degree program applications in recognition of limited testing availability due to the impact of COVID-19.
3. All applicants whose native language is not English must submit TOEFL scores. At this time there is no minimum TOEFL score required for admission. International students who have successfully completed two years of study in an English-speaking institution may waive the TOEFL exam requirement provided they can submit relevant transcripts. Applicants should contact ETS to have official test scores sent to the GSAPP Admissions Office via Institution Code 2164, Dept. Code 12. TOEFL scores are valid for two years after the test date.
4. Applicants who have no prior background in architecture must complete a 3-point course in architectural graphic presentation as a prerequisite for the Design Studio Sequence, before first registering in the M.Arch program.
5. To fulfill the prerequisite for the History and Theory Sequence all applicants must have completed a 3-point survey course in architectural history dealing with any of the following periods: Classical to Renaissance, Renaissance to Modern, or Modern.
6. To fulfill the prerequisites for the Building Science and Technology Sequence, all applicants must have completed a 3-point course in general physics or two 3-point calculus courses.

Applicants are strongly advised but not required to complete the following non-mandatory course work: one term of studio in the visual arts (drawing, painting or sculpture). In addition, a reading knowledge of a modern foreign language, a course in environmental studies, and additional courses in architectural history are recommended.

**ii. Online Application**

Candidates for the M.Arch program complete an online application for admission. Program-specific application deadlines, processes, and requirements are outlined in detail on the application page on the School's website. Application materials include transcript(s) from baccalaureate-degree(s), three letters of recommendation, personal statement, resumé/CV, GRE score (waived in the 2021 admissions cycle), TOEFL score (if applicable), and portfolio. Applicants may check the status of their application after submission by logging into their account with their email address and password and reviewing the status page. Applicants may contact the Admissions office at arch\_admissions@columbia.edu for additional information.

**iii. Portfolio**

A digital portfolio is required for admission to the M.Arch program. The digital portfolio should be in a single PDF document, 20 PDF pages or less (including the cover pages and table of contents, if applicable), and should not exceed 32 MB. The digital portfolio should be optimized for viewing on a standard size computer screen. Digital portfolios must be uploaded at the time the application is submitted in addition to the application form and supporting documents. Portfolios should contain reproductions of original drawings, prints, graphic design, or sculpture.

**B. Evaluation of Pre-professional Education**

Students who are admitted into the M.Arch program are informed in their letters of admission of the level at which they will enter the Design Studio Sequence. Based on the evidence submitted in the portfolio, the student's status in relation to the prerequisites and requirements of the studio sequence is determined. Placement into a more advanced studio is not done by application or petition but is determined by a faculty committee during the admissions process. A limited number of students may receive advanced standing points for Architecture A4001 and A4002 Core Studio I and II, thereby reducing the required studio sequence by two years. After the student's status has been determined by the M.Arch Committee on Admission, it is not subject to further review by GSAPP. No subsequent petitions for advanced standing in design studio courses are considered. Students who are placed into advanced studios should consult with the Academic and Student Affairs office about their curriculum.

**C. Transferring Academic Credit**

Students who have completed acceptable architecture course work prior to entering the M.Arch program may apply for advanced standing credit or course waivers in non-studio courses. No requests for advanced standing credit are considered until official copies of relevant transcripts have been submitted to the Admissions Office.

There are two situations in which one may receive advanced standing in the M.Arch program: (1) a student who is admitted into the second year of the M. Arch program may receive advanced standing for the first-year courses including the two design studios (potentially 36 points); (2) a student admitted into the first year with an undergraduate degree in architecture may receive credit for some courses; credit will be evaluated on an individual basis (maximum 9 points).

Information regarding procedure for students who wish to petition for advanced standing or course waiver is available at the time of first registration in September. Students may receive approval from a director at any time after enrollment. Official transfer of credit by the Columbia University registrar,

however, cannot be entered on the transcript until one year of full-time enrollment in the M.Arch program has been completed. Advanced standing forms are available in the Academic and Student Affairs Office and should be returned there for review.

Petitions for advanced standing credit in non-studio courses are normally reviewed by the director of the distributional sequence within GSAPP. In some cases, directors may ask to see examples of previous coursework. Students are advised to have course descriptions and previous coursework on hand at September registration to facilitate planning an academic program with an advisor.

Required documentation for advanced placement normally includes official course transcripts, catalog course descriptions, and at least one of the following: a course syllabus, complete course notes, or a complete set of tests, homework, and course-project documentation.

There are three circumstances under which courses can be waived: (1) the student presents evidence of professional experience in related subject matter; (2) the student passes a formal examination on the subject (with the approval of the sequence director); or (3) the student presents evidence of having passed relevant courses at the undergraduate or graduate levels. Because waivers do not carry point or course credit, elective courses must be taken to fulfill the point requirements for the M.Arch degree. (Students waived from A4112 AT2, A4113 AT3, A4114 AT4 and AT4115 AT5) must take a Building Science and Technology elective for each course waived.

## **II.4 Public Information**

### **A. Statement on NAAB-Accredited Degrees**

GSAPP's website includes the text specified in Appendix 1 of the 2014 NAAB Conditions for Accreditation; Images of this inclusion are included in Section 4: Supplemental Material, of this Architecture Program Report. This website can be accessed by clicking on the following hyperlink or by entering the URL into your web browser.

<https://www.arch.columbia.edu/programs/1-master-of-architecture/degree-requirements>

### **B. Access to NAAB Conditions and Procedures**

GSAPP's website includes a links section with links to the documents required in this section. This website can be accessed by clicking on the following hyperlink or by entering the URL into your web browser.

<https://www.arch.columbia.edu/programs/1-master-of-architecture/naab>

### **C. Access to Career Development Information**

GSAPP's website includes a links section with a link links to the documents required in this section. This website can be accessed by clicking on the following hyperlink or by entering the URL into your web browser.

[www.arch.columbia.edu/career-services](http://www.arch.columbia.edu/career-services)

### **D. Public Access to APRs and VTRs**

Reports are publicly available at the Office of the Dean and available electronically by request. GSAPP's website includes a statement about the availability of reports and letters required in this section. This website can be accessed by clicking on the following hyperlink or by entering the URL into your web browser.

<https://www.arch.columbia.edu/programs/1-master-of-architecture/degree-requirements>

### **E. ARE Pass Rates**

GSAPP's website includes a links section with a link to the NCARB published ARE pass rates required in this section. This website can be accessed by clicking on the following hyperlink or by entering the URL into your web browser.

<https://www.ncarb.org/pass-the-are/pass-rates/are5-pass-rates-school>

**F. Admissions and Advising**

GSAPP's website includes information required in this section. This website can be accessed by clicking on the following hyperlinks or by entering the URLs into your web browser.

<https://www.arch.columbia.edu/admissions/application-process>

<https://www.arch.columbia.edu/march-advising>

**G. Student Financial Information**

GSAPP's website includes information required in this section. This website can be accessed by clicking on the following hyperlinks or by entering the URLs into your web browser.

<https://www.arch.columbia.edu/admissions/tuition-aid>

### **III.1 Annual Statistical Reports**

Columbia University submits annual statistical reports in the format required by the NAAB *Procedures*. Reports submitted through the NAAB Annual Report Submission system are consistent with reports sent to other national and regional agencies including the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics.

Included in Section 4 (Supplemental Material) is a statement signed by Assistant Dean of Faculty Affairs, Sonya Marshall, person responsible for preparing and submitting annual statistical data to the NAAB Annual Report Submission.

### **III.2 Interim Progress Reports**

The 2015 Interim Progress Report will be provided by NAAB directly to the team at the same time as the VTR template and other materials. It is not included in this Report.

The NAAB-accredited degree program at Graduate School of Architecture, Planning and Preservation (GSAPP Columbia University) did not undergo a Focused Evaluation in the last accreditation term. A copy of the Focused Evaluation Program Report and Focused Evaluation Team Report are not applicable.

**Section 4: Supplemental Material**

### **I.1.1 Materials**

#### **A. Students**

##### **i. Studio Culture Policy**

As part of the National Architecture Accreditation Board (NAAB) conditions, each accredited school of architecture is required to have a written policy addressing its studio culture. This requirement resulted in the American Institute of Architecture Students Studio Culture Task Force (2002) that called for explicit policies that support specific shared values—optimism, respect, sharing, engagement, and innovation—within the studio.

GSAPP's Studio Culture Policy can be found at:

<https://www.arch.columbia.edu/architecture-studio-culture>

##### **ii. Academic Integrity Policies**

Policies on academic integrity covering plagiarism, student conduct, ownership of work, student conduct, and grading can be found at:

<https://www.arch.columbia.edu/policies-resources>

<https://www.arch.columbia.edu/honor-system>

<https://www.arch.columbia.edu/plagiarism-policy>

<https://www.arch.columbia.edu/grades>

<https://www.arch.columbia.edu/student-conduct>

<https://www.arch.columbia.edu/ownership-of-work>

##### **iii. Student Global Travel**

A comprehensive list of Student Global Travel (2015–2021) can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

#### **B. Assessment**

##### **i. Self-Assessment Report**

A copy of the School's 2018 institutional program review report, the "Graduate School of Architecture, Planning, and Preservation Self-Study," can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

##### **ii. University Self-Assessment Policies and Objectives**

More information about Columbia University Self-Assessment Policies and Objectives can be found at:

<https://provost.columbia.edu/content/provosts-academic-reviews>.

**C. Human Resources**

**i. Full-Time Faculty Resumes (FA 2018–present)**

Resumes, using the required template, for each full-time faculty member who teaches in the professional degree program can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**ii. Faculty Matrix (FA 2018–present)**

A matrix for each of the two academic years (by semester) prior to the preparation of the APR, which identifies each faculty member, including adjuncts, the courses they were assigned during that time and the specific credentials, experience, and research that supports these assignments can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**iii. Faculty Research, Scholarship, Conferences Attended and Creative Activities**

A comprehensive list of full-time faculty research, scholarship, conferences attended, and selected creative activities can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**iv. Faculty Mentorship Guidelines**

Faculty Mentorship Guidelines can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**v. University Human Resources Development Policies for Faculty**

Columbia University's policy regarding human resource development opportunities, such as sabbatical, research leave, and scholarly achievements can be found at:

<http://www.columbia.edu/cu/vpaa/handbook/instruction.html>

**vi. University Faculty Appointment, Promotion and Tenure Policies**

Columbia University's policies, procedures, and criteria for faculty appointment, promotion, and when applicable, tenure can be found at:

<http://www.columbia.edu/cu/vpaa/handbook/instruction.html>

<https://provost.columbia.edu/content/tenure-review-guidelines>

**vii. University EEO/AA Policies**

Columbia University's policies and procedures relative to EEO/AA for faculty, staff, and students can be found at:

<https://eoaa.columbia.edu>  
<https://www.arch.columbia.edu/discrimination-policy>  
<https://www.arch.columbia.edu/policies-resources>  
<https://www.arch.columbia.edu/student-conduct>  
<https://www.arch.columbia.edu/faculty-conduct>

**D. Financial**

**i. Exhibition Support for Faculty (2016–2021)**

A comprehensive list of exhibition financial support for faculty can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**ii. Student Scholarships and Financial Aid**

A comprehensive list of student fellowships, scholarship, and information about financial aid can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**iii. Student Prizes and Awards**

A comprehensive list of student prizes and awards can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**iv. Tenure-Track and Tenure Requirements**

Columbia University's policies and procedures relative to tenure-track and tenure requirements can be found at:

<http://www.columbia.edu/cu/vpaa/handbook/instruction.html>  
<https://provost.columbia.edu/content/tenure-review-guidelines>

**v. Development Campaign Descriptions**

A description of current development campaigns can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**E. Facilities**

**i. Facility Plans**

Plans of physical resources and facilities assigned to the program can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**F. Information Resources**

**i. Past and Planned Exhibitions (2015–2021)**

A comprehensive list of past and planned exhibitions (2015–2021) can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**ii. Past and Planned Lectures and Events (2015–2021)**

A comprehensive list of past and planned lectures and events (2015–2021) including events that can be used for AIA Continuing Education Learning Units can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**iii. University Library Collection Policy**

Columbia University's policies on library information resources policies including collection development can be found at:  
<https://library.columbia.edu/about/policies/collection-development-policies-strategies.html>

**G. Governance**

**i. Organization Chart**

A current organization chart can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**ii. Staff List**

A current organization chart can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**iii. Tenure-Track Faculty Review Guidelines**

Tenure-Track Faculty Review Guidelines can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**iv. Professional Practice Review Guidelines**

Professional Practice Review Guidelines can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

**v. Lecturer in Disciplinary Review Guidelines**

Lecturer in Disciplinary Review Guidelines can be found in the digital archive:  
<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

## **H. Curriculum Structure**

### **i. Course Descriptions (FA 2018–FA 2020)**

Descriptions of all courses offered within the curriculum of the NAAB-accredited degree program using the NAAB template can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

## **I. Reports and NAAB Materials**

### **i. Annual Statistical Report Statement**

Columbia University submits annual statistical reports in the format required by the *NAAB Procedures for Accreditation*. Reports submitted through the NAAB Annual Report Submission system are consistent with reports sent to other national and regional agencies including the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics.

A statement signed by Assistant Dean of Faculty Affairs, Sonya Marshall, person responsible for preparing and submitting annual statistical data to the NAAB Annual Report Submission, can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

### **ii. Visiting Team Report (2013)**

A copy of the previous Visiting Team Report (2013) can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

### **iii. Institutional Accreditation Letter**

Columbia University has been accredited by the Middle States Commission on Higher Education since 1921. The University underwent its decennial accreditation during the 2015–2016 academic year, and was re-accredited for the maximum allowable period, 8–10 years. A copy of the latest accreditation letter can be found in the digital archive:

<https://drive.google.com/drive/folders/1-9SwUvIwGUTWgBXRAmRUbETAaqWF6-GI?usp=sharing>

### **iv. Branch Questionnaire**

The NAAB-accredited degree program at Graduate School of Architecture, Planning and Preservation (GSAPP Columbia University) does not have any off-site branches. A branch questionnaire is not applicable.

### **v. Focused Evaluation Materials**

The NAAB-accredited degree program at Graduate School of Architecture, Planning and Preservation (GSAPP Columbia University) did not undergo a Focused Evaluation in the last accreditation term. A Focused Evaluation Program Report and Focused Evaluation Team Report are not applicable.

## **I.I.2 Index**

### **A. Comprehensive Table of Contents to the Report**

#### Section 1: Program Description

- I.1.1 History and Mission
  - A. Mission and History of the Institution
  - B. Missing and History of the School
    - i. History of the Program
    - ii. Program Mission
    - iii. Dean's Statement
  - C. Integration within the University Setting
- I.1.2 Learning Culture
  - A. Learning Culture and Learning Culture Assessment
    - i. Inside the Classroom
    - ii. Outside the Classroom
    - iii. Assessment of Learning Culture
  - B. Studio Culture Policy
    - i. Background
    - ii. Studio Culture Policy
- I.1.3 Social Equity
  - A. Institutional Initiatives for Diversity and Inclusion
    - i. Columbia University
    - ii. GSAPP Faculty Diversity
    - iii. GSAPP Faculty Support
  - B. Plans to Maintain or Increase Diversity
    - i. Faculty Diversity
    - ii. Public Programming
    - iii. Strategic Plan for Enrollment
    - iv. Administrative Staff
    - v. University-Wide Policies and Procedures
  - C. Process for Development of Diversity Plans
  - D. Long-Range Planning
- I.1.4 Defining Perspectives
  - A. Collaboration and Leadership
  - B. Design
  - C. Professional Opportunity
  - D. Stewardship of the Environment
  - E. Community and Social Responsibility
- I.1.5 Long Range Planning
  - A. Key Priorities
    - i. Faculty: Diversity and Breadth
    - ii. Students: Increased Support
    - iii. Pedagogy: Expand Areas of Expertise and Interdisciplinarity
    - iv. Research Culture
    - v. Professional Connections

- vi. Space
- B. Planning and review Processes
- I.1.6 Assessment
  - A. Program Self-Assessment
  - B. Curriculum Assessment and Development
- Section 2: Progress since the Previous Visit
  - Program Response to Conditions Not Met
  - Program Response to Causes of Concern
  - Program Response to Change in Conditions
- Section 3: Compliance with the Conditions for Accreditation
  - I.2.1 Human Resources and Human Resource Development
    - A. Faculty Overview
      - i. Current Faculty
    - B. Faculty Support
      - i. Faculty Mentorship
    - C. Faculty Professional Development
      - i. Conferences and Colloquia
      - ii. Publications
      - iii. Exhibitions and Biennales
      - iv. Research Support
    - D. Architect Licensing Advisor
    - E. Student Support Services
      - i. Academic Life and Advising
      - ii. Feedback and Course Evaluations
      - iii. Student Life and Wellness
      - iv. Student Organizations
      - v. Extracurricular Activities
      - vi. International Student Support
      - vii. Travel
      - viii. Alumni-Student Mentorship Programs
      - ix. Career Services
  - I.2.2 Physical Resources
    - A. Facilities
      - i. Studios and Classrooms
      - ii. Faculty and Administrative Offices
      - iii. Arthur Ross Architecture Gallery
      - iv. Temple Hoyle Buell Center for the Study of American Architecture
      - v. Cafes, Lounges, and Reading Rooms
      - vi. Avery Architectural and Fine Arts Library
      - vii. Making Studio
      - viii. Preservation Technology Laboratory
      - ix. Materials Laboratory
      - x. Output Shop

- xi. IT Support Facilities
- xii. Audio Visual Equipment (AV Office)
- B. Renovations 2014-2020
  - i. Improvements and Upgrades
  - ii. Hybrid Pedagogy Spaces
- C. Future Renovations and Needs
- I.2.3 Financial Resources
  - A. Expense and Revenue Categories
  - B. Faculty Grants
  - C. Student Scholarships
    - i. Fellowships and Funds
    - ii. Awards and Prizes
    - iii. Incubator Prize for Recent Graduates
  - D. Institutional Development Campaigns
    - i. Campaign: Design Create Engage
    - ii. Campaign Growth Forecast
- I.2.4 Information Resources
  - A. Avery Architectural and Fine Arts Library
    - i. User Privileges
    - ii. Avery Library Services
  - B. Digital Library Collections
  - C. Digital Pedagogies
    - i. GSAPP Skills Tree/Skills Trails
    - ii. Open-Source Platforms
  - C. Centers, Labs, and Initiatives
    - i. Temple Hoyne Buell Center for the Study of American Architecture
    - ii. Center for Resilient Cities and Landscapes
    - iii. Center for Spatial Research
    - iv. Housing Lab
    - v. Selected Labs and Initiatives
    - vi. GSAPP Incubator
  - D. Publications
    - i. Columbia Books on the City (CBAC)
    - ii. Student Publications
    - iii. Abstract
  - E. Events and Communications
    - i. Events and Public Programming
    - ii. Communications
    - iii. Website and Social Media
    - iv. Podcasts
  - F. Exhibitions
    - i. Arthur Ross Architecture Gallery
    - ii. End of Year Show
- I.2.5 Administrative Structure and Governance
  - A. Administrative Overview
    - i. Administrative Restructuring
  - B. Governance

- i. Faculty Governance and Reviews
    - ii. Student Governance (Program Council)
  - II.1.1 Student Performance Criteria
    - A. Overview of the Program Curricular Goals
    - B. Approach to Integrated Architectural Solutions
    - C. Methodology of Assessing Student Work
    - D. Student Performance Criteria Matrix
    - E. Student Performance Criteria
  - II.2.1 Institutional Accreditation
  - II.2.2 Professional Degrees and Curriculum
    - A. Master of Architecture
      - i. STEM-Designation
    - B. M.Arch Curriculum Structure by Category of Study
    - C. M.Arch Curriculum Structure by Semester Credit Hour Load
    - D. Other Degree Programs
    - E. Dual Degrees
    - F. Joint Studios
  - II.3 Evaluation of Preparatory Education
    - A. Prerequisites and Requirements for Admission
      - i. Academic Preparation
      - ii. Online Application
      - iii. Portfolio
    - B. Evaluation of Pre-Professional Education
    - C. Transferring Academic Education
  - II.4 Public Information
    - A. Statement on NAAB-Accredited Degrees
    - B. Access to NAAB Conditions
    - C. Access to Career Development Information
    - D. Public Access to APRs and VTRs
    - E ARE Pass Rates
    - F. Admissions and Advising
    - G. Student Financial Information
  - III.1.1 Annual Statistical Reports
  - III.1.2 Interim Progress Reports
- Section 4: Supplemental Material
  - I.1.1 Materials
    - A. Students
      - i. Studio Culture Policy
      - ii. Academic Integrity Policies
      - iii. Student Travel
    - B. Assessment
      - i. GSAPP Self-Study Report (2018)
      - ii. University Self-Assessment Policies and Objectives
    - C. Human Resources
      - i. Full-Time Faculty Resumes (Current)

- ii. Faculty Matrix (FA 2018–present)
- iii. Faculty Research, Scholarship, Conferences Attended, and Creative Activities (Full-Time Faculty)
- iv. Faculty Mentorship Guidelines
- v. University Human Resource Development Policies
- vi. University Faculty Appointment, Promotion, and Tenure Policies
- vii. University EEO/AA Policies

D. Financial

- i. Exhibition Support for Faculty
- ii. Student Scholarships and Financial Aid
- iii. Student Prizes and Awards
- iv. Tenure-Track and Tenure Requirements
- v. Development Campaigns Descriptions

E. Facilities

- i. Facility Plans

F. Information Resources

- i. Past and Planned Exhibitions (2015–2021)
- ii. Past and Planned Lectures and Events (2015–2021)
- iii. University Library Collection Policy

G. Governance

- i. Organization Chart
- ii. Staff List
- iii. Tenure-Track Faculty Review Guidelines
- iv. Professional Practice Review Guidelines

H. Curriculum Structure

- i. Course Descriptions (FA 2018–FA 2020 inclusive)

I. Reports and NAAB Materials

- i. Annual Statistical Report Statement
- ii. Visiting Team Report (2013)
- iii. Institutional Accreditation Letter
- iv. Branch Questionnaire
- v. Focused Evaluation Materials

I.1.1 Index

- A. Comprehensive Table of Contents to the Report