



**University of Pennsylvania
Department of Architecture**

2016 Visiting Team Report

M. Arch

Baccalaureate degree (any discipline; and typically 124 undergraduate credit hours + 84 graduate semester credit hours)

The National Architectural Accrediting Board
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Mission: The NAAB develops and maintains a system of accreditation in professional architecture education that is responsive to the needs of society and allows institutions with varying resources and circumstances to evolve according to their individual needs.

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I. Summary of Visit

a. Acknowledgements and Observations

This visiting team appreciates the hospitality of the program under the leadership of Chair Winka Dubbeldam and Dean Marilyn Taylor. The department chair is an appointment from within the School of Design. She benefits from the support of her faculty and a strong feeling of collegiality. The fact that the faculty and administration have a long history with the program is testament to the ongoing belief of leadership in fostering relationships and an open forum of discussion. Chair Dubbeldam, through personal character and academic merit, has clearly pushed this department progressively forward in her 3-year tenure. The program was prepared for this visit, and this team appreciates the collegiality in the gatherings with the faculty, administration, and students.

Unique Aspects of the Program

The architecture program is centrally located on the University of Pennsylvania campus. The campus benefits from the program's range of visible annual activities that range from the building and installing of temporary pavilions on the campus by the first-year students, resulting from their ARCH 500-level work, to the future prospects of establishing the robotic laboratory in the near term.

The interdisciplinary nature of the architecture program—with other departments within the School of Design (PennDesign) and within the university—is exemplary. The extensive integration of advanced technology as a teaching, learning, and research tool is very unique and a signature of the program.

The Architectural Archives collection is a valuable asset to the program in providing access for viewing historic drawings and sketchbooks of leading iconic figures from all departments of PennDesign.

The visiting team supports the president's interest in reinforcing PennDesign's incorporation of the Penn Compact 2020 points of Inclusion – Innovation – Impact.

Faculty

The standing faculty are dedicated to the success of the program. Faculty are accessible to the students while also being committed to involvement in a range of innovative areas of research and service in addition to strong involvement in participating in the governance of the department.

Staff

The staff members understand the mission of the program and the importance of supporting the program's students very well. They are dedicated to the success of the program and mentioned that they enjoy working with the faculty and administration. Many of the staff have been at the university for a number of years, and the range of expertise that they bring into the program is commendable.

The Instructional Technology support staff should be recognized for their amazing service. They are attuned to the high student and faculty demands of a design program that requires around-the-clock support for a range of advanced technology.

Students

The students are a happy and mature group, who are directly engaged in having a voice in how the program is run. Their maturity is astonishing. For example, they expressed appreciation of the custodial staff for doing a great job in keeping the design studio spaces maintained. This comment demonstrates the student body's generosity of spirit, but, even

more so, it reflects positively on the school's leadership, which establishes a culture of mutual respect among all members of the school, no matter their role. Students noted that they are being listened to and share their goals for using funding most effectively with the administration.

Physical Facilities

Given that the program's student body has grown over the years, there are very specific issues that arise regarding physical facilities. The level of ambition for studio work and the abundant use of technology put demands on the limited space. Over the long term, the school maintains a goal of expansion, but, in the meantime, changes to infrastructure on a yearly basis are required to preserve the high level of support to the students.

The capacity of the design studio space is inadequate and requires about 20% more space to accommodate the increase in the number of students. The program is greatly anticipating the next phase of expansion. There is also a lack of design review space, as well as temporary and permanent storage space. Students mentioned the problems they had regarding the temporary storage of pavilion structure materials during the building process.

Human Resources

The standing faculty are understaffed and overburdened with committee work. This visiting team is concerned that this condition will impact the quality of faculty scholarship, research, and community service.

Given the increases in student enrollment, the projected number of standing faculty is inadequate. A minimum of two additional full-time faculty positions are needed for the following areas: structures and technology (search currently underway) and innovative technology (for the new robotic laboratory). This visiting team supports the search next year for a history and theory faculty member along with determining the future standing faculty needs for the program.

Information Technology

While the IT department personnel are very efficient in what they do, there is a concern that current levels of support are not sustainable. With a staff of eight, there is no down time for doing advanced planning that may allow for establishing more partnerships with other campus IT departments and sorting out space needs (the staff are currently using a closet for a conference room).

b. Conditions Not Achieved

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

II. Progress Since the Previous Site Visit

2004 Criterion 13.9, Non-Western Traditions: Understanding of *parallel and divergent canons and traditions of architecture and urban design in the non-Western world.*

Previous Team Report (2010): This criterion is not met. Though the team appreciates the broader global view offered throughout the curriculum, there is not sufficient evidence found in

required coursework to satisfy that an understanding of the non-Western traditions of architecture and urban design is expected from all students.

2016 Team Assessment: This criterion remains **Not Met**. In the *2014 Conditions for Accreditation*, Non-Western Traditions is now part of Student Performance Criterion A.7: History and Culture. While some elective-area course lecture and Discourse Colloquium options show some evidence of this understanding and progress since the previous visit, exposure to cultural norms in a variety of indigenous and vernacular settings was not clear in the syllabus description and student papers.

2004 Criterion 13.14, Accessibility: Ability to *design both site and building to accommodate individuals with varying physical abilities*.

Previous Team Report (2010): This criterion is not met. Though there is an attempt to integrate aspects of accessibility within design presentations, there remains insufficient evidence to indicate the ability level for use of accessibility standards in both building and site design.

2016 Team Assessment: This criterion remains **Not Met**. In the *2014 Conditions for Accreditation*, Accessibility is now part of Student Performance Criterion B.3: Codes and Regulations. Site accessibility issues have improved and show progress. However, the fulfillment of accessibility requirements within this criterion were consistently inadequate in building design, and in areas of required clearances at access doors, in bathrooms, around kitchen fixtures, and in hallway widths.

2004 Criterion 13.20, Life-Safety: Understanding of *the basic principles of life-safety systems with an emphasis on egress*.

Previous Team Report (2010): This criterion is not met. There is not sufficient evidence of an understanding of the principles of life safety particularly with insufficient and incorrect representation in cumulative core studio work. This subject is also not addressed in detail in either lecture or technology course work.

2016 Team Assessment: This criterion is now **Met**. In the *2014 Conditions for Accreditation*, Life-Safety is now part of Student Performance Criterion B.3: Codes and Regulations. While criterion B.3 is not met as a whole, there is evidence of an understanding of life-safety issues in both site and building projects, as found in ARCH 601: Design Studio III.

III. Compliance with the 2014 Conditions for Accreditation

PART ONE (I): INSTITUTIONAL SUPPORT AND COMMITMENT TO CONTINUOUS IMPROVEMENT

PART ONE (I): SECTION 1 – IDENTITY AND SELF-ASSESSMENT

I.1.1 History and Mission: The program must describe its history, mission, and culture and how that history, mission, and culture shape the program's pedagogy and development.

- Programs that exist within a larger educational institution must also describe the history and mission of the institution and how that shapes or influences the program.
- The program must describe its active role and relationship within its academic context and university community. This includes the program's benefits to the institutional setting, and how the program as a unit and/or individual faculty members participate in university-wide initiatives and the university's academic plan. This also includes how the program as a unit develops multi-disciplinary relationships and leverages opportunities that are uniquely defined within the university and its local context in the surrounding community.

2016 Analysis/Review: In the 2015-2016 program year, the Department of Architecture celebrates its 125th year. Originally, it was Benjamin Franklin who founded the University of Pennsylvania in 1740, which was then called the College of Philadelphia, and it became the nation's first university (1791). While architects have been associated with the university since its founding in 1740, the idea of establishing a Department of Architecture and associated arts was not raised until the 1850s. In 1868, the university established the Department of Arts, which was later renamed the Department of Science. Architecture courses were taught in the Department of Arts in 1869, making architecture at the University of Pennsylvania the **second-oldest program** in the United States.

The Department of Architecture, with its M. Arch professional degree program, exists in one of the eight graduate schools, the School of Design (PennDesign), and has approximately 646 graduate students. PennDesign includes the departments of Architecture, City and Regional Planning, Fine Arts, and Landscape Architecture, as well as a program in Historic Preservation. The architecture faculty also teaches architecture and fine arts undergraduate programs in the university.

The primary mission of the M. Arch program is to educate architects through the development of advanced design education combined with disciplinary skills, technological knowledge, and methods of inquiry into the professional practice of architecture. Architecture recently has undergone a change from an analog to a digital platform and, with that, the architectural practice and the production and construction of architecture has changed and innovated. The Department of Architecture as an educational institution is at the forefront of this development and has combined traditional skill-based education with highly advanced digital design studios and advanced courses taught by experts in the field.

In this context, the department will formalize its emerging identity as a laboratory for ideas, expertise, and innovations; a think tank for exchanges and debates across disciplinary boundaries; and a broadcast center engaging a growing audience and international network. It will rebuild its standing faculty, develop new advanced degree options in specialized areas, and expand doctoral studies. The department will develop collaborations among its various programs, and with other departments of the school and other divisions of the university. It will prepare the next generation of leaders to evolve the discipline and renew the discipline's capacity to enhance the quality of life.

The department's goal is to be at the forefront of advanced research and design by creating an advanced research institute that focuses on new design methodologies and future manufacturing through the interlinked intelligence of digital design, scripting, and robotics.

I.1.2 Learning Culture: The program must demonstrate that it provides a positive and respectful learning environment that encourages optimism, respect, sharing, engagement, and innovation between and among the members of its faculty, student body, administration, and staff in all learning environments, both traditional and non-traditional.

- The program must have adopted a written studio culture policy that also includes a plan for its implementation, including dissemination to all members of the learning community, regular evaluation, and continuous improvement or revision. In addition to the matters identified above, the plan must address the values of time management, general health and well-being, work-school-life balance, and professional conduct.
- The program must describe the ways in which students and faculty are encouraged to learn both inside and outside the classroom through individual and collective learning opportunities that include, but are not limited to, participation in field trips, professional societies and organizations, honor societies, and other program-specific or campus-wide and community-wide activities.

2016 Analysis/Review: This condition is **Met**. Education in the professional degree program is centered on the culture of working in the design studio, while providing students with the opportunity to learn from each other as well as become educated in developing projects that vary in content and context and emphasize different aspects of architecture. Students are allowed to work in their own studio space, which is open and available at all times. This collaborative teamwork helps the students to understand an important aspect of their profession: the fact that almost all their work in their future practice will be in a team format. It also provides the possibility in the ever-more-international context of the school to learn from different cultures, including semester-long foreign study at the Architectural Association in London and summer programs in Paris, Colombia, and Greece.

The faculty adopted a studio culture policy in 2009 and has recently adopted a new one. Students are now given multiple channels and roles for participating in student governance and evaluation. New accommodations have been made to foster a more positive and engaging atmosphere for students through the recent facility renovations and the encouragement of the development of social and cultural student organizations such as Diverse Design, as well as a design-build group of students who partake in an annual construction project on campus. The studio culture has developed into an immersive and interactive environment for students and faculty to engage as a community, and it is a culture that allows students to engage and reinforce each other in social and academic realms. In particular, the studio representative structure has been one of the primary regulators of the studio culture at the University of Pennsylvania. In recent years, meetings of the studio representatives have regularly addressed everyday housekeeping issues and deeper questions concerning equity, overwork, and health.

I.1.3 Social Equity: The program must have a policy on diversity and inclusion that is communicated to current and prospective faculty, students, and staff and is reflected in the distribution of the program's human, physical, and financial resources.

- The program must describe its plan for maintaining or increasing the diversity of its faculty, staff, and students as compared with the diversity of the faculty, staff, and students of the institution during the next two accreditation cycles.
- The program must document that institutional-, college-, or program-level policies are in place to further Equal Employment Opportunity/Affirmative Action (EEO/AA), as well as any other diversity initiatives at the program, college, or institutional level.

2016 Analysis/Review: This condition is **Met** through information provided in the APR and confirmed during the visit in discussions with the faculty and administration. In accordance with the University of Pennsylvania's Non-Discriminatory Policy, the Department of Architecture is committed to hiring talented faculty from diverse backgrounds. The dean will appoint a member of the standing faculty to serve as the school's affirmative action officer each year. Before appointments are proposed to the dean, the affirmative action officer must be satisfied that searches or other processes have been conducted in a way that identified the most qualified women and members of underrepresented minority groups,

interviewed them, and gave full consideration to them. The affirmative action officer also advises search committees on strategies that are likely to be effective in building a diverse faculty. Every effort is made to recruit women and minorities during each search process.

PennDesign's goal of increasing diversity is clearly expressed by matriculating and retaining representatives from all segments of society in order to build a diverse student population. In order to ensure this diversity, the school, through its admissions and financial aid policies, has a "needs blind" admissions process. All accepted applicants demonstrating financial need (contingent upon the submission of required documentation) are guaranteed to receive a financial award from the school, the amount of which is determined relative to their overall need figure. The Department of Architecture specifically targets merit awards to encourage the matriculation of qualified minority candidates. Each year, the department offers diversity scholarships for candidates from underrepresented minorities, which provide full tuition for the duration of the student's education. The department also participates in programs that assist underrepresented and disadvantaged students, such as the McNair Scholars Program and Project 1000, whereby the department waives the application fees for these applicants. The department also sends targeted mailings to prospective applicants from the National Name Exchange and the GRE Search Service. In addition, the dean sends information to HBCUs, Hispanic Serving Institutions, and Tribal Colleges.

I.1.4 Defining Perspectives: The program must describe how it is responsive to the following perspectives or forces that impact the education and development of professional architects. Each program is expected to address these perspectives consistently and to further identify, as part of its long-range planning activities, how these perspectives will continue to be addressed in the future.

- A. Collaboration and Leadership.** The program must describe its culture for successful individual and team dynamics, collaborative experiences, and opportunities for leadership roles. Architects serve clients and the public, engage allied disciplines and professional colleagues, and rely on a spectrum of collaborative skills to work successfully across diverse groups and stakeholders.

2016 Analysis/Review: The program has a strong student leadership program with multiple avenues for involvement and collaboration—some initiated by students directly. The initial studio is based on team collaboration projects, as well as an opportunity in conjunction with the ARCH 501 class to design and build a full pavilion structure. The student-initiated programs include the COLLAB initiative (design-build student group) and the Diverse Design minority group. Students also have opportunities to serve on the department's Lecture and Events Committee along with a faculty member, which offers students the chance to collaborate in order to identify, invite, and host lecturers that interest them.

- B. Design.** The program must describe its approach for developing graduates with an understanding of design as a multi-dimensional protocol for both problem resolution and the discovery of new opportunities that will create value. Graduates should be prepared to engage in design activity as a multi-stage process aimed at addressing increasingly complex problems, engaging a diverse constituency, and providing value and an improved future.

2016 Analysis/Review: Design as a multi-dimensional process is a cornerstone of the University of Pennsylvania's planning. Now moving into a digital platform, the school's underlying strategy is to update Visual Design courses and integrate them into the design studio. The school also focuses on design research, and the design philosophy is staying current and ahead of emerging technologies. The integration of both research and research skills is a core element of the school's teaching philosophy.

- C. Professional Opportunity.** The program must describe its approach for educating students on the breadth of professional opportunity and career paths for architects in both traditional and non-traditional settings, and in local and global communities.

2016 Analysis/Review: As noted in the APR, the Professional Practice courses offer insight into the IDP process. The Professional Practice instructor is the department's IDP Coordinator. The

university (as a whole) provides career counseling and organizes a Career Day as an opportunity to engage with architectural practices and investigate job opportunities and careers. Multiple studios are taught by outside faculty, which provides valuable insight into the professional realm.

- D. Stewardship of the Environment.** The program must describe its approach for developing graduates who are prepared to both understand and take responsibility for stewardship of the environment and the natural resources that are significantly compromised by the act of building and by constructed human settlements.

2016 Analysis/Review: Environmental stewardship was evidenced through the APR and during the visit. The school has new design courses and studios relating directly to issues such as resiliency planning and technological innovation. Sustainability studies are implemented in the core curriculum as well as in advanced elective seminars, many of which are cross-program.

- E. Community and Social Responsibility.** The program must describe its approach for developing graduates who are prepared to be active, engaged citizens able to understand what it means to be a professional member of society and to act on that understanding. The social responsibility of architects lies, in part, in the belief that architects can create better places, and that architectural design can create a civilized place by making communities more livable. A program's response to social responsibility must include nurturing a calling to civic engagement to positively influence the development of, conservation of, or changes to the built and natural environment.

2016 Analysis/Review: A call to civic engagement and social responsibility is evident in several forms in the school program. One initiative called "IDEA Days" asks that students interact directly with the city and its inhabitants, and offer direct interaction, built solutions, and social initiatives. Other aspects are covered by a Professional Practice course that discusses ethics in the architecture profession and in the realm of citizens engaging with society.

I.1.5 Long-Range Planning: The program must demonstrate that it has identified multi-year objectives for continuous improvement with a ratified planning document and/or planning process. In addition, the program must demonstrate that data is collected routinely, and from multiple sources, to identify patterns and trends so as to inform its future planning and strategic decision making. The program must describe how planning at the program level is part of larger strategic plans for the unit, college, and university.

2016 Analysis/Review: The program has demonstrated that it has identified and established a long-range plan for the M. Arch at the School of Design level and at the university level within the APR and as evidenced during the visit.

Within the School of Design, the M. Arch program identifies its objectives for student learning, with technology and innovation being key attributes of the program in addition to the interdisciplinary projects of the university as a whole. Over the next few years, a new faculty team will be hired to develop an educational plan involving a robotic laboratory. The long-range plan for this laboratory is leading to the establishment of the PennDesign Advanced Technology Center, which will be a cross-school program exploring new forms of research, fabrication, field experimentation, and innovative design. Chair Dubbeldam, as the founding director of this institute, is responsible for the development of the robotic laboratory and the concurrent education plan that underlies its mission.

At the university level, Dean Taylor has pushed the School of Design to gain high visibility among the other 11 schools at the University of Pennsylvania through interdisciplinary projects, and it has gained visibility at the global level through a symposium held at the Penn Wharton China Center. In the long-range planning, the five perspectives are opportunities that are integrated to educate the students as independent thinkers who are proactive and intelligent future professionals that are ready to lead. Students not only participate directly in the affairs of the Department of Architecture and in the PennDesign Student Council, but they also take the lead in design-build projects, such as the new initiative for the annual pavilion to be built in selected national locations. Another long-range planning goal of the School of Design's evolution over the long term is further development of the Department of

Architecture's Design-Research concept, which involves 3-D printing and developing the department's robotic design, production technologies, and design evolutionary thinking and execution.

I.1.6 Assessment:

A. Program Self-Assessment Procedures: The program must demonstrate that it regularly assesses the following:

- How well the program is progressing toward its mission and stated objectives.
- Progress against its defined multi-year objectives.
- Progress in addressing deficiencies and causes of concern identified at the time of the last visit.
- Strengths, challenges, and opportunities faced by the program while continuously improving learning opportunities.

The program must also demonstrate that results of self-assessments are regularly used to advise and encourage changes and adjustments to promote student success.

B. Curricular Assessment and Development: The program must demonstrate a well-reasoned process for curricular assessment and adjustments, and must identify the roles and responsibilities of the personnel and committees involved in setting curricular agendas and initiatives, including the curriculum committee, program coordinators, and department chairs or directors.

2016 Analysis/Review: The architecture program has employed a regular assessment program with mechanisms for feedback for both self-assessment and curricular assessment.

Since the previous visit, there have been additions to the faculty, and a new department chair has been appointed. Curricular changes have evolved, and there have been clear attempts to address some of the issues noted during the previous visit.

In addition, since the previous visit, the program mission and objectives have evolved, including an objective to develop a new robotics program within the M. Arch program and the further evolution of several courses, such as ARCH 501: Design Studio I, ARCH 601: Design Studio III, and the ARCH 671 and ARCH 672: Professional Practice I and II courses. Through regular coordinator meetings, monthly faculty meetings, and regular committee meetings, the faculty get together to discuss ongoing teaching issues and curriculum development. The regular meetings help to ensure that the same curriculum is being taught across all sections of a course.

Several of the course syllabi in the team room represented a new "standard" syllabus that has been developed since the previous visit (with the new faculty) to help ensure that objectives and criteria are met uniformly. Anecdotal evidence suggests that faculty promotions to higher level studios have also helped to create an internal self-assessment process and have promoted a review of the teaching syllabi and criteria with a fresh set of eyes.

Currently, the faculty is undergoing a review of the history curriculum and courses as the department searches for additional faculty to expand that course area.

PART ONE (I): SECTION 2 – RESOURCES

I.2.1 Human Resources and Human Resource Development:

The program must demonstrate that it has appropriate human resources to support student learning and achievement. This includes full- and part-time instructional faculty, administrative leadership, and technical, administrative, and other support staff.

- The program must demonstrate that it balances the workloads of all faculty to support a tutorial exchange between the student and the teacher that promotes student achievement.
- The program must demonstrate that an Architecture Licensing Advisor (ALA) has been appointed, is trained in the issues of IDP, has regular communication with students, is fulfilling the requirements as outlined in the ALA position description, and regularly attends ALA training and development programs.
- The program must demonstrate that faculty and staff have opportunities to pursue professional development that contributes to program improvement.
- The program must describe the support services available to students in the program, including, but not limited to, academic and personal advising, career guidance, and internship or job placement.

[X] Demonstrated

2016 Team Assessment: The program has demonstrated that it can support student learning and achievement. This visiting team has two concerns regarding the program's human resources:

1. The number of enrolled students exceeds the capacity of the existing space by about 20% (40-50 students). The program has experienced fast-growing enrollment over the last 3 years, following a slowly diminishing enrollment rate over the years prior to that: Fall 2006: 209 students; Fall 2010: 201; Fall 2011: 188; Fall 2012: 196; Fall 2013: 222; and Fall 2014: 226.
2. Faculty seem to be overloaded with committee assignments, especially tenure track faculty (or recently tenured faculty), and with full teaching, scholarship, and service requirements.

Overview:

Scholarship and research are facilitated in every way possible through research seminars, attendance at professional meetings, economic incentives, and administrative and logistical support. The department regularly approves travel reimbursements for attendance at conferences, symposia, and professional meetings of interest to the faculty.

Many of the faculty are licensed members of the AIA and remain current in their knowledge of practice and licensure through participation in professional organizations and events. The program recognizes the importance of attending professional and academic conferences for professional development. To facilitate this, the school provides funding to members of the standing faculty for travel costs and conference fees, and it encourages participation in continuing education events for licensed faculty.

An initial scholarly leave of one semester with salary is typically granted to assistant professors in the period between their reappointment review and their tenure review. A sabbatical leave is granted to university faculty members holding the rank of assistant professor, associate professor, or professor after a period of 6 or more consecutive years of full-time service in the standing faculty. Additional paid scholarly leave may be granted periodically. Sabbatical leaves may be for one semester at full salary or two semesters at half salary. The university and/or the department regularly grants scholarly leaves, maternity leaves, and leaves-without-pay as needed by the standing faculty. The department also considers special requests for extenuating circumstances.

I.2.2 Physical Resources: The program must describe the physical resources available and how they support the pedagogical approach and student achievement.

Physical resources include, but are not limited to, the following:

- Space to support and encourage studio-based learning.
- Space to support and encourage didactic and interactive learning, including labs, shops, and equipment.
- Space to support and encourage the full range of faculty roles and responsibilities, including preparation for teaching, research, mentoring, and student advising.
- Information resources to support all learning formats and pedagogies in use by the program.

If the program's pedagogy does not require some or all of the above physical resources, for example, if online course delivery is employed to complement or supplement onsite learning, then the program must describe the effect (if any) that online, onsite, or hybrid formats have on digital and physical resources.

[X] Described

2016 Team Assessment: Progress regarding physical resources has been made since the previous visit. Several phases of renovation have been completed (and future additional phases have been studied) starting with a capital projects renovation of Meyerson Hall, which began in 2012. Meyerson Hall is the hub of the School of Design. The school has other classroom support spaces at additional facilities on campus, including the classrooms and exhibition space in the Fischer Fine Arts Building, and exhibition space in Addams Hall and the Morgan Building.

To date, the renovation of Meyerson Hall has provided more flexible studio-based learning spaces emphasizing team-based learning and technology-serviced capabilities. However, with the recent increase in the student population, the studios appeared to have reached capacity at the time of the visit, and there was discussion among faculty and students indicating that the studio capacity needs to be 20% larger to serve the student population. There are potential limits to the future enrollment of students if the student body growth continues and studio space remains the same.

During the building renovation, some ancillary teaching spaces (lower- and upper-level galleries) were renovated and now provide space for lectures, pin-ups, exhibits, juries, student initiatives, and community events. The difficulty appears to be that, with the limited amount of critique space, there is an almost complete overlap of resources during mid-term and final reviews. As a result, the reviews are literally on top of each other and cause the faculty to have difficult scheduling issues.

Most recently, the entire HVAC system of Meyerson Hall was removed and replaced. The building's security system was also expanded with installation of a new card key access system to provide secure access to students and faculty, along with the rest of the university. In addition to the renovation of Meyerson Hall, one of the ancillary programs (a post-professional program in architecture) was relocated to an adjacent building to provide even more expansion of studio space for the M. Arch program within the core space in Meyerson Hall.

Regarding technology-related upgrades in Meyerson Hall, all studios have been outfitted with in-studio Maker Bots (supervised by student graduate and student technical representatives), and studios on the second, third, and fourth floors have installed digital projection technology. In the building, there are also two dedicated instruction laboratories with 24 high-end workstations for computer technology work and an elaborate fabrication laboratory on the fourth floor with a huge range of low-tech hardware tools and high-tech 3-D printing and fabrication tools available to the students. These facilities are monitored by staff and student volunteers.

The anticipated future phase of construction includes a four-story, 26-foot-long expansion of the building, which will provide a clearer identity for the School of Design with respect to the campus and the neighboring urban fabric while also providing space for the future robotics classes, which will be part of the architecture program of the School of Design.

I.2.3 Financial Resources: The program must demonstrate that it has appropriate financial resources to support student learning and achievement.

[X] Demonstrated

2016 Team Assessment: In Academic Year 2014-2015, the M. Arch program's operating expenses totaled \$5.1M. Of this amount, \$4.1M or 80% was dedicated to academic compensation (standing faculty, practice professors, lecturers, teaching assistants, and research assistants) while \$1.0M supported the direct administrative functions of the M. Arch program. The M. Arch program spent \$664,000 to support the activities of the program. In addition, the program used designated endowment funds to support faculty on professorships [\$518,000], students traveling abroad and competitions [\$330,000], and allocations for awards and prizes [\$36,000]. The M. Arch program also received central administrative support from the school in the areas of computing, admissions and registrar, development, budget and finance, and facilities services, the cost of which is not included in the numbers above.

Grants and Scholarships:

The chair of each department awards departmental scholarships on an individual merit basis.

Faculty Development Fund:

The Faculty Development Fund (FDF) is provided by the dean. Each eligible faculty member receives \$1,300 in his/her FDF account annually. The funds, providing a dedicated uniform source of funding to pursue professional development and research activities, are for standing faculty, professors of practice, and full-time lecturers. Faculty can accumulate up to \$3,900 in their FDFs from the dean at any given time. FDF funds can be combined with external funding.

Budget Highlights:

- The overall budget is aimed at keeping in line with the established amount of dollars spent per student, and it increases proportionately with increased student enrollment. This includes faculty expenditure and compensation. Financial aid has increased at least as much as the growth in tuition.
- There have not been significant changes in funding models or faculty compensation. The salaries and expenditures have maintained their proportionate growth with the rest of the university, as have the operating budgets and facilities budgets, which are balanced through proportionate distribution by the university's central offices.
- There are planned or in-progress institutional development campaigns that include designations for the program.
- The program is included in the Development Plan created each year by the dean and associate dean for external affairs in coordination with the University Office of Development and Alumni Relations.
- The Development Plan sets yearly targets for gifts and donations to professorships, fellowships, capital improvements, and the support of existing and new programs.
- The school also attracts annual funding, which is used primarily in support of student fellowship unless the donor indicates otherwise.
- The program has raised funds specifically for the new robotic laboratory and for the PennDesign Advanced Technology Center.

I.2.4 Information Resources: The program must demonstrate that all students, faculty, and staff have convenient, equitable access to literature and information, as well as appropriate visual and digital resources that support professional education in the field of architecture.

Further, the program must demonstrate that all students, faculty, and staff have access to architectural 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.

[X] Demonstrated

2016 Team Assessment: The University of Pennsylvania's library system is composed of 13 library branches that support the teaching, learning, and research activities of all of the university's faculty and students. The Fisher Fine Arts Library (FFAL) supports the degree programs in Architecture, City and Regional Planning, Fine Arts (painting, sculpture, combined media, digital media, and printmaking), Historic Preservation, Landscape Architecture, and Urban Spatial Analytics, as well as the Ph.D. programs in Architecture and City and Regional Planning.

The FFAL has staff available for direct assistance to library users. The FFAL maintains extensive service hours during the academic year, averaging 100 hours per week. Reference and information services in architecture and related fields are provided by professional librarians on site, by phone, or by email.

The FFAL provides access to 250,000 print resources, the majority of which directly support study in architecture and related design fields. In addition to storage on site, the university has an offsite storage facility, LIBRA, located in New Jersey, with a volume count of 85,000. The library provides access to electronic equipment, including computer workstations, photocopiers, microform reader/printers, scanners, and slide viewers/sorters. Additionally, students can request individual study carrels and use of student shelves for material charging.

The library invests over \$200,000 annually in direct acquisitions and upkeep, including electronic resources, monographs, and arts serials.

In addition to the FFAL, the Architectural Archives collection and gallery provides research options for staff and students, as well as offering lectures and seminars for architectural students and the entire University of Pennsylvania student body. The visiting team found this collection to be very impressive and accessible, and a great asset to the program.

The above information was included in the APR and was confirmed during the visit.

This condition was **Demonstrated with Distinction**.

I.2.5 Administrative Structure and Governance:

- **Administrative Structure:** The program must describe its administrative structure and identify key personnel within the context of the program and the school, college, and institution.
- **Governance:** The program must describe the role of faculty, staff, and students in both program and institutional governance structures. The program must describe the relationship of these structures to the governance structures of the academic unit and the institution.

[X] Described

2016 Team Assessment: The program chair reports directly to the dean of the School of Design. The chair has two primary areas of responsibility: (1) the development of a collegial environment within which individual members of the faculty can contribute to the educational mission of the department while being encouraged in their teaching and personal development, and (2) the reporting and championing of the needs of the department to the dean. The chair is responsible for securing and maintaining faculty and administrative staff, for ensuring the appropriateness of courses and the adequacy of programs, and for

promoting scholarly and research activities. Other administrative responsibilities of the chair relate to the daily functioning of the department and its administrative staff.

An administrative structure with numerous positions has been developed within the department to assist the chair with academic administration and coordination. Individuals performing these roles do not receive teaching relief.

Department Staff Positions:

- Department Coordinator
- Financial Administrators (two)
- Administrative Assistants
- Art-Time Work-Study students.

Other Staff Positions Connected to the Department:

- Associate Chair, Student Affairs (M. Arch)
- Director of the Graduate Group in Architecture (Ph.D. and M.S.)
- Director of the Undergraduate Program (B.A. with a Major in Architecture)
- Director of the Master of Science in Design (MSD-AAD)
- Academic Advisors for each level of the professional degree program
- Semester Studio Coordinators, who teach and assist in the administration of the first four semesters
- Thesis Coordinator to oversee Thesis Preparation and Thesis
- Coordinators for the summer abroad programs
- Standing committees on admissions, curriculum, lecture series, and technology

PART TWO (II): EDUCATIONAL OUTCOMES AND CURRICULUM

PART TWO (II): SECTION 1 – STUDENT PERFORMANCE – EDUCATIONAL REALMS AND STUDENT PERFORMANCE CRITERIA

II.1.1 Student Performance Criteria: The SPC are organized into realms to more easily understand the relationships between individual criteria.

Realm A: Critical Thinking and Representation: Graduates from NAAB-accredited programs must be able to build abstract relationships and understand the impact of ideas based on the research and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. This includes using a diverse range of media to think about and convey architectural ideas, including writing, investigative skills, speaking, drawing, and model making.

Student learning aspirations for this realm include:

- Being broadly educated.
- Valuing lifelong inquisitiveness.
- Communicating graphically in a range of media.
- Assessing evidence.
- Comprehending people, place, and context.
- Recognizing the disparate needs of client, community, and society.

A.1 Professional Communication Skills: *Ability* to write and speak effectively and use appropriate representational media both with peers and with the general public.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 511: History and Theory I and ARCH 671: Professional Practice I.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 501: Design Studio I; ARCH 502: Design Studio II; ARCH 601: Design Studio III; and ARCH 602: Design Studio IV.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 511: History and Theory I.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 602: Design Studio IV.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 521: Visual Studies I. This course seeks to expand the exploration of modes of representation and communication into advanced digital formats. The introduction of the Maker Bot 3-D printers into the curriculum enhances the capacity to inform the three-dimensional design understanding at this level of the curriculum. This criterion is **Met with Distinction**.

A.6 Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices regarding the incorporation of such principles into architecture and urban design projects.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 631: Technology Case Studies. Precedent studies are very well documented with a complete dissection of building systems. The rubric for evaluating each of the students' projects is comprehensive and provides excellent feedback so that students are aware of how to improve analysis in the future. This criterion is **Met with Distinction**.

A.7 History and 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, and technological factors.

[X] Not Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was not found in student work prepared for ARCH 611: History and Theory III. The Global Architectural Discourse Colloquium generally explores the place of architectural practices in the larger social and political discourse. Limited evidence was found for exposing students to cultural norms of a variety of indigenous and vernacular settings. The colloquium format of this course suggests that the content of the course varies.

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 buildings and structures.

[X] Not Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was not found in student work prepared for ARCH 601: Design Studio III and ARCH 511: History and Theory I. No evidence was found in these courses (limited evidence found in ARCH 511) for an understanding of the

diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures.

Realm A. General Team Commentary: Architects must be able to deploy critical thinking toward the research and analysis of diverse sets of data and information, and thoughtfully represent and communicate the outcomes. The students display good investigative skills but struggle with the ability to connect relevant precedent, historic tradition, and global culture to design outcomes. The M. Arch students have shown strong communication and representation skills by utilizing an array of media and formats to communicate ideas and intent, from the written word to physical and digital models, to mixed visual media, to thorough analysis of drawings.

A diverse range of media to promote thinking about and conveying architectural ideas—including writing, investigative skills, speaking, drawing, and model making—is strongly represented in the program. The inclusion of the Maker Bot 3-D printers sprinkled throughout the studios, along with the advanced modeling strategies integrated throughout design studios in the curriculum, works well in support of the program’s “making” focus. Comprehending a variety of indigenous, vernacular, and diverse needs of people, place, and context was not evident in the courses reviewed.

Realm B: Building Practices, Technical Skills and Knowledge: Graduates from NAAB-accredited programs must be able to comprehend the technical aspects of design, systems, and materials, and be able to apply that comprehension to architectural solutions. Additionally, the impact of such decisions on the environment must be well considered.

Student learning aspirations for this realm include:

- Creating building designs with well-integrated systems.
- Comprehending constructability.
- Integrating the principles of environmental stewardship.
- Conveying technical information accurately.

B.1 Pre-Design: *Ability* to prepare a comprehensive program for an architectural project, which must include 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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 672: Professional Practice II.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 502: Design Studio II.

B.3 Codes and Regulations: *Ability* to design sites, facilities, and systems consistent with the principles of life-safety standards, accessibility standards, and other codes and regulations.

[X] Not Met

2016 Team Assessment: It was recommended that the team look for evidence of student achievement at the prescribed level in student work prepared for ARCH 601: Design Studio III. The team found a consistent lack of understanding of, and the ability to apply, the principles of accessibility, including incorrect door swings, inadequate clearances, and exit routes that do not comply with life-safety codes.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 531: Construction I and ARCH 532: Construction II.

B.5 Structural Systems: *Ability* to demonstrate the basic principles of structural systems and their ability to withstand gravity, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 602: Design Studio IV and ARCH 532: Construction II.

B.6 Environmental Systems: *Understanding* of the principles of environmental systems' design, how systems can vary by geographic region, and the tools used for performance assessment. This must include active and passive heating and cooling, indoor air quality, solar systems, lighting systems, and acoustics.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 531: Construction I, and ARCH 533: Environmental Systems I and ARCH 534: Environmental Systems II.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 532: Construction II.

B.8 Building Materials and Assemblies: *Understanding* of the basic principles utilized 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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 501: Design Studio I and ARCH 531: Construction I. The students' work goes well beyond an understanding to a high level of ability, particularly in the creation of the pavilion assemblies and the elective course for the design, manufacture, and construction of a full-size pavilion on the campus. This criterion is **Met with Distinction**.

B.9 Building Service Systems: *Understanding* of the basic principles and appropriate application and performance of building service systems, including mechanical, plumbing, electrical, communication, vertical transportation security, and fire protection systems.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 532: Construction II and ARCH 534: Environmental Systems II.

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.

[X] Not Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was not found in student work prepared for ARCH 531: Construction I; ARCH 671: Professional Practice I; or ARCH 672: Professional Practice II. While construction cost estimating was found, evidence for project financing methods and feasibility, operational costs, and life-cycle costs was not found.

Realm B. General Team Commentary: The strength of the Realm B criteria was most evident in the understanding, spatial manipulations, and analysis of the materials and assemblies of the building envelope. Student work emphasized the exterior form making in collaboration with the building materials, envelope, and interior and exterior systems. Student work in technical documentation tended to emphasize this exterior form development, and other Realm B Student Performance Criteria do not have this depth of detail. To this end, SPC B.3 and SPC B.10 were **Not Met**.

Realm C: Integrated Architectural Solutions: Graduates from NAAB-accredited programs must be able to synthesize a wide range of variables into an integrated design solution. This realm demonstrates the integrative thinking that shapes complex design and technical solutions.

Student learning aspirations in this realm include:

- Synthesizing variables from diverse and complex systems into an integrated architectural solution.
- Responding to environmental stewardship goals across multiple systems for an integrated solution.
- Evaluating options and reconciling the implications of design decisions across systems and scales.

C.1 Research: *Understanding* of the theoretical and applied research methodologies and practices used in the design process.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 501: Design Studio I and numerous subsequent studios, and in the ARCH 611:

History and Theory III Design Research Project. The evidence continues in the numerous elective courses at the ARCH 700 level. This criterion is **Met with Distinction**.

C.2 Evaluation and Decision Making: *Ability* to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 502: Design Studio II and ARCH 601: Design Studio III.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 531: Construction I; ARCH 534: Environmental Systems II; and ARCH 602: Design Studio IV.

Realm C. General Team Commentary: Realm C was strongest in the C.1 Research area, as this is a strength of the departmental program. Form and place-making utilize the student/faculty research collaborations to encourage a depth of exploration, design, and assembly. Projects in multiple courses are needed to achieve the comprehensive criterion of C.3 Integrated Design. The depth of student work within the Construction I and Environmental Systems courses bolsters the building envelope emphasis and form-making of the design studio work. Plan and site development is less emphasized in the student work.

Realm D: Professional Practice: Graduates from NAAB-accredited programs must understand business principles for the practice of architecture, including management, advocacy, and acting legally, ethically, and critically for the good of the client, society, and the public.

Student learning aspirations for this realm include:

- Comprehending the business of architecture and construction.
- Discerning the valuable roles and key players in related disciplines.
- Understanding a professional code of ethics, as well as legal and professional responsibilities.

D.1 Stakeholder Roles in Architecture: *Understanding* of the relationship between the client, contractor, architect, and other key stakeholders, such as user groups and the community, in the design of the built environment, and understanding the responsibilities of the architect to reconcile the needs of those stakeholders.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 671: Professional Practice I.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 672: Professional Practice II.

D.3 Business Practices: *Understanding* of the basic principles of business practices within the firm, including financial management and business planning, marketing, business organization, and entrepreneurialism.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 672: Professional Practice II.

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.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 672: Professional Practice II.

D.5 Professional Ethics: *Understanding* of the ethical issues involved in the exercise of professional judgment in architectural design and practice, and understanding the role of the AIA Code of Ethics in defining professional conduct.

[X] Met

2016 Team Assessment: Evidence of student achievement at the prescribed level was found in student work prepared for ARCH 671: Professional Practice I and ARCH 672: Professional Practice II.

<p>Realm D. General Team Commentary: The Department of Architecture program meets the criteria within the Practice realm. There is clear evidence in ARCH 671: Professional Practice I and ARCH 672: Professional Practice II that students understand the business of architecture and construction; professional roles, related disciplines, and interdependent consultants; and construction cost and value engineering analysis.</p>

PART TWO (II): SECTION 2 – CURRICULAR FRAMEWORK

II.2.1 Institutional Accreditation:

In order for a professional degree program in architecture to be accredited by the NAAB, the institution must meet one of the following criteria:

1. The institution offering the accredited degree program must be, or be part of, an institution accredited by one of the following U.S. regional institutional accrediting agencies for higher education: the Southern Association of Colleges and Schools (SACS); the Middle States Association of Colleges and Schools (MSACS); the New England Association of Schools and Colleges (NEASC); the North Central Association of Colleges and Schools (NCACS); the Northwest Commission on Colleges and Universities (NWCCU); and the Western Association of Schools and Colleges (WASC).
2. Institutions located outside the U.S. and not accredited by a U.S. regional accrediting agency, may request NAAB accreditation of a professional degree program in architecture only with explicit written permission from all applicable national education authorities in that program's country or region. Such agencies must have a system of institutional quality assurance and review. Any institution in this category that is interested in seeking NAAB accreditation of a professional degree program in architecture must contact the NAAB for additional information.

[X] Met

2016 Team Assessment: The University of Pennsylvania is accredited by the Middle States Commission on Higher Education. The university has been accredited since 1921 and has been evaluated for accreditation approximately every 5 years. The university's most recent onsite evaluation was in 2014. The Commission accredits institutions of higher education in Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, and other locations along the eastern seaboard as well as those in locations abroad.

II.2.2 Professional Degrees and Curriculum: The NAAB accredits the following professional degree programs with the following titles: the Bachelor of Architecture (B. Arch), the Master of Architecture (M. Arch), and the Doctor of Architecture (D. Arch). The curricular requirements for awarding these degrees must include professional studies, general studies, and optional studies.

The B. Arch, M. Arch, and/or D. Arch are titles used exclusively with NAAB-accredited professional degree programs.

Any institution that uses the degree title B. Arch, M. Arch, or D. Arch for a non-accredited degree program must change the title. Programs must initiate the appropriate institutional processes for changing the titles of these non-accredited programs by June 30, 2018.

The number of credit hours for each degree is specified in the *NAAB Conditions for Accreditation*. Every accredited program must conform to the minimum credit hour requirements.

[X] Met

2016 Team Assessment: As noted in the APR, the University of Pennsylvania offers only one professional degree in architecture, the Master of Architecture. This requires a Baccalaureate degree with 124 undergraduate credit hours plus 84 graduate semester credit hours, totaling 208 total undergraduate and graduate credit hours.

PART TWO (II): SECTION 3 – EVALUATION OF PREPARATORY EDUCATION

The program must demonstrate that it has a thorough and equitable process to evaluate the preparatory or preprofessional education of individuals admitted to the NAAB-accredited degree program.

- Programs must document their processes for evaluating a student's prior academic coursework related to satisfying NAAB Student Performance Criteria when a student is admitted to the professional degree program.
- In the event that a program relies on the preparatory educational experience to ensure that admitted students have met certain SPC, the program must demonstrate that it has established standards for ensuring these SPC are met and for determining whether any gaps exist.
- The program must demonstrate that the evaluation of baccalaureate degree or associate degree content is clearly articulated in the admissions process, and that the evaluation process and its implications for the length of a professional degree program can be understood by a candidate prior to accepting the offer of admission. See also, Condition II.4.6.

[X] Met

2016 Team Assessment: Students entering the professional degree program with an undergraduate degree in a subject other than architecture undertake a 3-year course of study consisting of 28 course units (typical courses are 1 CU; studios are 2 CUs). These students may be encouraged to attend a summer immersive studio to become familiar with the technology and studio culture of the department. Students with a 4-year undergraduate degree in architecture may receive advanced standing of up to 1 year.

Applicants to the Master of Architecture professional degree program must hold a Bachelor of Arts or Bachelor of Science degree. To be admitted without conditions to the 3-year program, an applicant is required to possess the following: an understanding of mechanics, heat, light, sound, and electricity, as demonstrated, for example, through the successful completion of not less than one college-level physics course (applicants from the University of Pennsylvania can fulfill the prerequisite through the successful completion of Physics 08 and 09); an understanding of calculus, as demonstrated, for example, through the successful completion of not less than one college-level calculus course (applicants from the University of Pennsylvania can fulfill the prerequisite through the successful completion of Math 104 and 105); a general knowledge of the history of Western architecture from ancient Egyptian architecture through the modern period, as demonstrated by the successful completion of not less than one college-level course; a basic ability to produce freehand drawings of architectural forms and spaces, as demonstrated by the successful completion of one college-level descriptive drawing course or by portfolio submission of appropriate work from design studios; and the successful completion of a minimum of two semesters of college-level design studio courses. Candidates admitted with deficiencies in any of these prerequisites must fulfill them before matriculation.

Preference is given to individuals who have completed a balanced undergraduate education that includes study in the arts, sciences, and humanities and who demonstrate leadership potential in the field. Preparation in the visual arts, such as drawing, sculpture, graphics, photography, film, or new media, is desirable, as well as computing and advanced writing skills. The admissions committee may require incoming students to take specific prerequisite courses to meet conditions of admission. A program of study is offered in the summers specifically for this.

A description of the preparatory or pre-professional education process of students must include the process for verifying general education credits, professional credits, and, where appropriate, the basis for granting advanced standing. This is to be documented in a student's admissions and advising record.

The department website provides the admissions information and process. The school's Admissions Office reviews GPA/GRE and coursework transcripts, faculty members evaluate portfolios as teams and as a group, and recommendation letters and other supporting materials are factored into the admissions process.

Advanced standing applicants are evaluated on individual portfolios and transcripts. The criteria for this evaluation process were described during interviews, but written documentation was not available to the visiting team. The number of students accepted into the M. Arch program with advanced standing has varied from 2 (year 2015) to 12 (year 2013). It is this visiting team's understanding that advanced standing students are credited with the first year of the program—ARCH 500-level classes—and are placed in the second year of the 3-year program.

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PART TWO (II): SECTION 4 – PUBLIC INFORMATION

The NAAB expects programs to be transparent and accountable in the information provided to students, faculty, and the general public. As a result, the following seven conditions require all NAAB-accredited programs to make certain information publicly available online.

II.4.1 Statement on NAAB-Accredited Degrees:

All institutions offering a NAAB-accredited degree program or any candidacy program must include the *exact language* found in the *NAAB Conditions for Accreditation*, Appendix 1, in catalogs and promotional media.

[X] Met

2016 Team Assessment: The exact NAAB language required is found on the website provided by the University of Pennsylvania, which is noted below.

<http://www.design.upenn.edu/architecture/graduate/accreditation-information> Accessed February 2, 2016.

II.4.2 Access to NAAB Conditions and Procedures:

The program must make the following documents electronically available to all students, faculty, and the public:

The 2014 NAAB Conditions for Accreditation

The Conditions for Accreditation in effect at the time of the last visit (2009 or 2004, depending on the date of the last visit)

The NAAB Procedures for Accreditation (edition currently in effect)

[X] Met

2016 Team Assessment: Links to the *NAAB 2014 Conditions for Accreditation* and *NAAB 2015 Procedures for Accreditation* are found on the website provided by the University of Pennsylvania, which is noted below.

<http://www.design.upenn.edu/architecture/graduate/accreditation-information> Accessed February 2, 2016.

II.4.3 Access to Career Development Information:

The program must demonstrate that students and graduates have access to career development and placement services that assist them in developing, evaluating, and implementing career, education, and employment plans.

[X] Met

2016 Team Assessment: Links to the university's Career Development Information websites are found on the PennDesign website, which is noted in the APR. These links include access to national organizations, such as AIA, NCARB; Philadelphia's Community Design Advocacy; the University of Pennsylvania's career services; and the University of Pennsylvania's career services for design students. The links are noted below.

<http://www.design.upenn.edu/alumni/resources/resource-guide-graduates> Accessed February 2, 2016.

<http://www.vpul.upenn.edu/careerservices/design/> Accessed February 2, 2016.

<http://www.vpul.upenn.edu/careerservices/> Accessed February 2, 2016.

II.4.4 Public Access to APRs and VTRs:

In order to promote transparency in the process of accreditation in architecture education, the program is required to make the following documents electronically available to the public:

- All Interim Progress Reports (and narrative Annual Reports submitted 2009-2012).
- All NAAB Responses to Interim Progress Reports (and NAAB Responses to narrative Annual Reports submitted 2009-2012).
- The most recent decision letter from the NAAB.
- The most recent APR.¹
- The final edition of the most recent Visiting Team Report, including attachments and addenda.

[X] Met

2016 Team Assessment: Access to the current and previous APRs and/or VTRs was found on the Department of Architecture website, which is noted below.

<http://www.design.upenn.edu/architecture/graduate/accreditation-information> Accessed February 2, 2016.

II.4.5 ARE Pass Rates:

NCARB publishes pass rates for each section of the Architect Registration Examination by institution. This information is considered useful to prospective students as part of their planning for higher/post-secondary education in architecture. Therefore, programs are required to make this information available to current and prospective students and the public by linking their websites to the results.

[X] Met

2016 Team Assessment: Links to the NCARB-administered ARE pass rates for the University of Pennsylvania are found on the NCARB website link provided by the University of Pennsylvania, which is noted below.

<http://www.ncarb.org/ARE/ARE-Pass-Rates/Pass-Rates-by-School.aspx> Accessed February 2, 2016.

II.4.6 Admissions and Advising:

The program must publicly document all policies and procedures that govern how applicants to the accredited program are evaluated for admission. These procedures must include first-time, first-year students as well as transfers within and outside the institution.

This documentation must include the following:

- Application forms and instructions.
- Admissions requirements, admissions decision procedures, including policies and processes for evaluation of transcripts and portfolios (where required), and decisions regarding remediation and advanced standing.
- Forms and process for the evaluation of pre-professional degree content.
- Requirements and forms for applying for financial aid and scholarships.
- Student diversity initiatives.

[X] Met

¹ This is understood to be the APR from the previous visit, not the APR for the visit currently in process.

2016 Team Assessment: Links to the admissions and advising policies and procedures are found on the website provided by the University of Pennsylvania, which is noted below.

<http://www.design.upenn.edu/graduate-admissions/apply> Accessed February 2, 2016.

Diversity initiatives regarding outreach to minority applicants, minority scholarships, and international students from Europe, Asia, and South America were described by both the departmental and school-wide leadership.

II.4.7 Student Financial Information:

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

[X] Met

2016 Team Assessment: Links to student financial information are found on the website provided by the University of Pennsylvania, which is noted below.

<https://www.design.upenn.edu/graduate-admissions/tuition-and-financial-aid> Accessed February 2, 2016.

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PART THREE (III): ANNUAL AND INTERIM REPORTS

III.1 Annual Statistical Reports: The program is required to submit Annual Statistical Reports in the format required by the *NAAB Procedures for Accreditation*.

The program must certify that all statistical data it submits to the NAAB has been verified by the institution and is consistent with institutional reports to national and regional agencies, including the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

[X] Met

2016 Team Assessment: The APR has provided a letter from the Department of Architecture certifying the information requested, and the reports were viewed on the NAAB website.

III.2 Interim Progress Reports: The program must submit Interim Progress Reports to the NAAB (see Section 11, *NAAB Procedures for Accreditation*, 2012 Edition, Amended).

[X] Not Applicable

2016 Team Assessment: Interim Progress Reports are not available. Per the NAAB, this is moot because this program has not yet completed an IPR.

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IV. Appendices:

Appendix 1. Conditions Met with Distinction

I.2.4 Information Resources:

The Fisher Fine Arts Library is a gem. In addition, the Architectural Archives collection and gallery (and Bill Whitaker) is amazing. It provides original drawings and documents that are extremely accessible and available for staff, faculty, and student research. It also offers lectures and seminars for architectural students and the entire University of Pennsylvania student body.

A.5 Ordering Systems:

These digital and physical explorations of modes of representation and communication are integrated throughout the program. The introduction of the Maker Bot 3-D printers into the curriculum enhances the capacity to inform the three-dimensional design understanding at this level of the curriculum.

A.6 Use of Precedents:

Technology case studies and precedent studies are very well documented, with a complete dissection of building systems. The rubric for evaluating each of the students' projects is comprehensive and provides excellent feedback so that students are aware of how to improve analysis in the future.

B.8 Building Materials and Assemblies:

The students' work goes well beyond the understanding level of the criterion to a high level of ability. The students work in collaborative teams, particularly in the design, assembly, and construction of full-size structures on campus, which are enjoyed by the University of Pennsylvania community.

C.1 Research:

Research is a hallmark of the program. It begins with the initial design studio and continues through subsequent studios and lectures, as well as the elective courses and the Design Research Project.

Appendix 2. Team SPC Matrix

	Professional Communication Skills	Creative Thinking Skills	Innovative Skills	Architectural Design Skills	Ordering Systems	Use of Processes	History and Culture	Cultural Diversity and Social Equity	Pre-Design	Site Design	Code and Regulation	Technical Documentation	Structural Systems	Environmental Systems	Building Envelope Systems and Materials	Building Materials and Assembly	Building Service Systems	Financial Consideration	Research	Evaluation and Decision Making	Integrative Design	Stakeholder/Partner Involvement	Project Management	Business Practices	Legal Responsibilities	Professional Ethics
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	C1	C2	C3	D1	D2	D3	D4	D5
SPC Expected to have been met in preparatory education																										
SPC Met in NAAB-accredited program																										
ARCH501: Design Studio I		X																	X							
ARCH502: Design Studio II		X						O		X											X					
ARCH601: Design Studio III		X									O										X					
ARCH602: Design Studio IV		X		X									X									X				
ARCH521: Visual Studies I					X													O								
ARCH522: Visual Studies II					X																					
ARCH621: Visual Studies II																										
ARCH511: History & Theory I	X		X																							
ARCH512: History & Theory II																										
ARCH611: History & Theory III								O												X						
ARCH531: Construction I												X	X	X	X	X	O				X					
ARCH532: Construction II												X	X	X	X	X										
ARCH533: Environmental Systems I														X												
ARCH534: Environmental Systems II														X			X				X					
ARCH535: Structures I																										
ARCH536: Structures II																										
ARCH631: Technology Case Studies						X																				
ARCH671: Professional Practice I	X																		O		X					X
ARCH672: Professional Practice II									X		O								O				X	X	X	X

X = Found O = Suggested area in APR but not found by visiting team

Appendix 3. The Visiting Team

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V. Report Signatures

Respectfully Submitted,

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Team Chair**

Representing the NCARB

**Katherine Cofer, AIA, PMP
Team Member**

Representing the AIA

**Alejandra Cervantes Enriquez
Team Member**

Representing the AIAS

**Thomas Fowler, IV, AIA, NCARB
Team Member**

Representing the ACSA

**Wendy Evans Joseph, FAIA, LEED® AP
Nonvoting Team Member**