



**Carnegie Mellon University  
School of Architecture**

## **Architecture Program Report for the 2018 NAAB Visit for Continuing Accreditation**

**Bachelor of Architecture**

450 CMU units (150 credit-hours)

**Year of the Previous Visit:**

2012

**Current Term of Accreditation:**

Six Years

**Submitted to: The National Architectural Accrediting Board**

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**Carnegie Mellon University | School of Architecture**

**Architecture Program Report for the 2018 NAAB Visit for Continuing Accreditation**

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# Carnegie Mellon University

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September 4, 2017

Ms. Helene Combs Dreiling  
Interim Executive Director  
National Architectural Accreditation Board  
1735 New York Avenue NW  
Washington, DC 20006

Dear Ms. Rutledge:

I write to inform you of the decision of Carnegie Mellon University to seek continuing accreditation for its Bachelor of Architecture (BArch) degree.

We anticipate the arrival of the visiting team on campus in March 2018 and a decision on accreditation from the NAAB Board at its summer 2018 Meeting.

Accompanying this letter are all of the materials stipulated in the 2015 NAAB Procedures for Accreditation and the 2014 NAAB Conditions for Accreditation.

We look forward to continuing the process to full accreditation.

Very truly yours,



Laurie R. Weingart, Ph.D., Interim Provost

## APR – SECTION 1 – PROGRAM DESCRIPTION

### I.1.1 History and Mission

*A brief history of the institution, its mission, founding principles, and a description of how that is expressed in the context of 21st century, U.S. higher education*

**Carnegie Mellon University:** CMU has been a birthplace of innovation throughout its 117-year history. Today, it is a global leader bringing groundbreaking ideas to market and creating successful start-up businesses. The faculty members are renowned for working closely with students to solve major scientific, technological, and societal challenges. The University puts a strong emphasis on creating things – from art to robots to architecture.

Carnegie Mellon is a private, internationally ranked research university with programs in areas ranging from science, technology and business, to public policy, the humanities and the arts. More than 13,000 students in the university's seven schools and colleges benefit from a small student-to-faculty ratio and an education characterized by its focus on creating and implementing solutions for real problems, interdisciplinary collaboration and innovation.

*CMU is the only school founded in the United States by the industrialist and philanthropist Andrew Carnegie, who wrote the time-honored words, "My heart is in the work," when he donated the funds to create Carnegie Technical Schools in 1900 in Pittsburgh, Pennsylvania. In 1912, the schools, including the School of Architecture, became the Carnegie Institute of Technology, highly regarded for both the arts and technology. A merger with the Mellon Institute - the nation's first major research institute - created Carnegie Mellon University in 1967.*

*During the leadership of its two most recent presidents, Jared L. Cohon and Subra Suresh, CMU established campuses in Silicon Valley, CA, and Doha, Qatar, and degree-granting programs in Africa, Asia, Australia, Europe, and Latin America. Suresh helped to found the Global Research Council, a coordinating group for research-funding agencies around the world. CMU also launched the Simon Initiative to bring together university and global leaders in a discussion of how technology can be fully utilized to enhance learning outcomes for students around the world. Most recently, the university began construction of the Tepper Quad, a major campus hub that will house the business school and expansive collaborative spaces. Current Interim President Farnam Jahanian will continue CMU's work on campus, in the community and around the world, following tenets set forth in the university's strategic plan, including:*

*The university is committed to cultivating an active, technology-enhanced, "know how to learn" environment where each individual can grow and thrive. We will remain dedicated to nurturing student, faculty, and staff growth in key areas such as deep disciplinary knowledge; leadership, communications, and interpersonal skills; as well as physical and emotional well-being.*

*Carnegie Mellon is widely recognized as a destination for world-class talent from around the globe. It will continue to focus on attracting a diverse and inclusive community of students, faculty, staff, and alumni willing to cross academic boundaries in a culture where innovation, entrepreneurial thinking, and action are valued and fostered.*

*Our strengths in education, research, and creativity impact the economic and cultural life of the Pittsburgh region, the nation, and the world as we pursue strategic partnerships and focus on solving societal challenges. We will expand our leadership in knowledge creation for the 21st century across our campuses and locations.*

The Strategic Plan 2025 for the university focuses on increasing the quality, richness, and value of “the CMU experience” for all individuals, the community, as well as the University’s impact in the world. (See <https://www.cmu.edu/strategic-plan/>).

**The College of Fine Arts (CFA):** The School of Architecture (SoA) is one of five schools within CMU’s College of Fine Arts (CFA), alongside the schools of Art, Design, Drama, and Music. Founded in 1905, the CFA was the first comprehensive arts learning institution in the United States. Today it is a unique constellation of internationally top-ranked conservatory schools in the arts embedded within a tier-one research university. The five schools are committed to community engagement, supportive of creative risk-taking, and actively embracing diversity. The pedagogy across the college is built on the principles of “thinking through doing” and “learning through making” in studio and conservatory-based environments, and respect for tradition while encouraging innovation.

The CFA is internationally renowned for its unique multidisciplinary capabilities and distinctive pedagogical approaches, for the success and influence of its students and alumni, for visionary leadership in the development and transformation of the professions, and for its vital role in melding the exceptional capabilities of a great university with society and culture. The college shares numerous research projects, interdisciplinary centers, and educational programs with other units across the university. In addition to undergraduate and graduate programs in each of the five schools, the college offers interdisciplinary bachelor’s degrees integrating studies in fine arts with work in the humanities, sciences, or computer science. Interdisciplinarity, a core value for the CFA, is realized not only in individual exploration and scholarship of our students and faculty across various colleges and disciplines, but also through the BxA Intercollege Degree Programs and a number of degrees offered in collaboration with other academic units. The Integrative Design, Arts and Technology Network (IDeATe) connects students and faculty from across the university through coursework and collaborative studio experiences, particularly amongst CFA faculty .

*A brief history of the program, its mission, founding principles, and a description of how that is expressed in the context of the 21st century, U.S., architecture education.*

**School of Architecture Mission Statement:** The School of Architecture (SoA) provides deep immersion in the discipline of architecture, intensified by the broader Carnegie Mellon culture of interdisciplinary innovation and creative inquiry. Our undergraduate and graduate degree programs prepare students to be excellent, discipline-defining design thinkers in diverse global contexts. This world-class architecture education is enhanced by our position within one of the world’s leading research and entrepreneurship institutions, and by the fundamental premise that architectural excellence demands both rigorous training in fundamentals and the development of unique specializations. Students may extend their core knowledge through studios and coursework in architecture subdisciplines like sustainable design or computational design or urban design, or through interdisciplinary interaction with CMU’s other renowned programs. Though every Carnegie Mellon architecture student graduates with intensive architecture knowledge, no two graduates leave with exactly the same focus. Graduates of SoA excel in the roles architects have performed for centuries - and in new roles catalyzed by the depth and breadth of their education - to create and execute innovative solutions to an ever expanding range of global challenges.

**SoA History:** Architecture has been an integral part of education at CMU since its beginnings in 1905. The founder and patrons of the Carnegie Technical Schools saw it as their goal to create a particularly American fusion of the Ecole Polytechnique and the Ecole des Beaux-Arts. Carnegie Tech’s first Professor of Architecture, Henry Hornbostel, was himself a student at the Paris Ecole des Beaux-Arts (in 1895-97).

By the end of the ‘40s, the teaching of Architectural Design did not emphasize the established Beaux-Arts principles, rather, the observation of human behavior and needs in relation to the built and natural environment. In the ‘60s, under the direction of Paul Schweikher, the undergraduate B.Arch program

became a five-year, fixed-length program. As was common elsewhere during this period, it consisted of an introductory year of basic design followed by four years of architectural design. A long list of distinguished visitors and lecturers were introduced.

The appointment of Charles M. Eastman in 1967 as Assistant Professor of Architecture and Computer Design marked a departure prophetic of new departmental directions. Eastman developed a Ph.D. program in the new science of Computer-Aided Design. The appointment of Volker Hartkopf in 1972 as Assistant Professor of Architecture broadened the graduate program with an M.S. and a Ph.D. offering in Building Science. Since this time, scientific and technical research has been at the center of the SoA's mission and identity. The succession of Department Heads from 1979 to 2004 made strategic hires in these areas that securely established our research reputation. These research programs and the associated faculty have raised the status and reputation of the CMU SoA, especially on the focused ideas of building performance, computing, and construction management, as they can be applied to global practice, business, and academic research. Our PhD graduates have gone on to become leaders in academia around the world.

In 1998, the Department of Architecture was re-designated the CMU "**School** of Architecture" to reflect the strength of its conservatory-based professional practice degree program, in parallel with the other four departments becoming schools at the same time. In the early 2000s, the SoA Advisory Board recommended an increase in Master's programs as a source of revenue for the School, and the SoA quickly went from two M.S. programs to seven, moving the school ever further in the research-based, post-professional graduate program direction.

In July 2004 Laura Lee was appointed Head. Seeking to re-elevate the importance of design studio alongside interdisciplinary arts and professional practice, she worked to develop SoA into a center of excellence for integrated design. In July 2008, Stephen Lee (no relation to Laura Lee) was appointed as the Interim Head of the SoA. After a search in 2009, Lee was appointed to a full five-year term as Head, and in 2015 he was re-appointed to a second five-year term. As alumnus with a B.Arch and an M.Arch in Advanced Building Studies from CMU in the mid-70s, a practitioner, a researcher, and as a faculty member since 1981, he brings a unique perspective to the position. Through a deep belief that design is the backbone and core of our discipline, he has worked to bridge and integrate teaching, practice and research in the SoA, and to expand interdisciplinary opportunities in those venues.

During his Headship, Lee has worked to revise the B.Arch curriculum to provide more fundamental courses in the first three years, and to provide greater flexibility in the last two years. The Urban Design/Build Studio (UDBS) was begun, the Digital Fabrication (dFAB) Lab was expanded and made available to multiple studios and courses, the Computational Design Lab (CoDe) was created, hands-on activities were extended into the architectural studies coursework and the Shop continued to play an important curricular role.

In 2011 an outside consultant was engaged to conduct a year-long strategic planning process that re-focused the school on the themes of design thinking, learning by making, and improving the quality of the built environment. A new "3+2" B.Arch curriculum was implemented in 2012-13 to reflect these ambitions. The studios in Margaret Morrison Carnegie Hall (MMCH) building were substantially renovated to support better collaboration, while computer labs were disassembled and workstations were incorporated into the studios to further the integration of analog and digital design in the studio.

After administering the NAAB re-accreditation process for the B.Arch in 2012 resulting in a six year term, Lee oversaw the internal CMU Presidential Advisory Board process for the whole SoA in 2014. These reviews, two years apart from one another, provided excellent outside assessment of our strengths and weaknesses and recommendations for improvement. Steps taken since 2014 include hiring 12 new full-time faculty, who developed a suite of new courses in SoA's areas of expertise, the development of a new SoA website and logo along with a more comprehensive publicity strategy, providing better mentoring and advising for all students from B.Arch to PhD, restructuring the Master of Urban Design

(MUD) degree, and developing two new studio-based master's programs, the Master of Advanced Architectural Design (MAAD, begun 2015-2016), and the professional Master of Architecture (M.Arch) degree (begun August 2017).

**B.Arch Identity:** The four primary distinguishing features of the B.Arch program are:

*Integration of Arts and Tech: One of the world's preeminent technical research universities, Carnegie Mellon has long offered students leading - edge learning experiences at the intersection of the arts and technology - allowing them to create successful futures in careers that they envision. In SoA's B.Arch program, technology is more than a technique or tool: we emphasize digital workflows and the seamless integration of computation, systems analysis, and data into our creative design processes.*

*Integration of Design and Research: B.Arch students are immersed in Carnegie Mellon's and SoA's long standing culture of research and design innovation. We relentlessly focus on excellent design and on scientific, research-based methods, forging transdisciplinary connections, speculations, and architectural solutions for the built environment. B.Arch students have access to a host of learning and research spaces, including the Intelligent Workplace, Computational Design (Code) Lab, Digital Fabrication Lab (dFAB), the Urban Design Build Studio's PROJECT RE\_ and IDeATe's Hunt Library Makerspaces.*

*Small Program Size: Our small, focused program facilitates close interactions among faculty and students, easy access to our state-of-the-art research and fabrication facilities, and personalized learning and research. In our studios and beyond, opportunities are enabled from the bottom up, rather than prescribed from the top down.*

*Pittsburgh, The City Everyone is Talking About: Where better to study architecture than in a venerable city with both an industrial heritage and a tech-driven future? The buzz you've heard is true: one of the USA's most livable, affordable, green innovation post-industrial hubs provides the perfect home and laboratory for research, design, working and living.*

*A sample of the types of activities and initiatives that demonstrate the program's benefit to the institution through discovery, teaching, engagement, and service.*

The impact and reputation of CMU's SoA is related to its ability to motivate sophisticated student work, both design and research, and to innovate, both pedagogically and technically. Our B.Arch Admissions Committee is working closely with the central administration to attract and retain the best students by improving our selection process and to more accurately hit our target enrollment. The new M.Arch should improve SoA's overall stature, competitiveness, and rankings, in the educational and professional communities, in the Pittsburgh region and around the world, particularly at the graduate level, given its traditional emphasis on STEM-based research. We are eager to strengthen studio and design culture by attracting top quality students with educations from other domestic and foreign schools, and promoting connections of B.Arch and M.Arch students through shared studios and coursework.

SoA's long standing community and outreach programs include Architecture Explorations, the Pre-College Architecture Program, the Urban Design Regional Employment Action for Minorities Program (UDream), the Architecture Building Communities summer camps at the Carnegie Museum of Art, and the Osher Academy of Lifelong Learning; these programs have long reached out to the city and region.

In Pittsburgh, faculty and specific programs maintain close connections to the Osher Lifelong Learning Institute, Heinz Architectural Center at the Carnegie Museum of Art (CMoA), the University of Pittsburgh's Department of History of Art & Architecture, the Mattress Factory, the Pittsburgh Department of City Planning, the Heinz Endowments, the R.K.Mellon Endowments, the Master Builders Association, the Trade Institute of Pittsburgh, the Energy Innovation Center (EIC), the Green Building Alliance, and Phipps Conservatory. The SoA head was a developer of, and serves as an Ambassador in, the Science



Ambassadors Program created from a Pittsburgh–based pilot effort of the National Academy of Sciences and National Academy of Engineering. Faculty members and graduate students in the building sciences participate in this program.

Nationally, our faculty serve on the boards of the USGBC, the International Well Building Institute, and ACADIA. Globally, our faculty conduct international workshops for organizations such as the Electricité de France (EDF), Singapore Building Construction Authority (BCA), East China Architectural Design Institute, and the Guangdong Electric Power Design Institute.

*A summary of the benefits derived to the program from the institutional setting.*

**Carnegie Mellon University:** SoA surveys reveal that the number one reason a student chooses to matriculate in our B.Arch is CMU itself. CMU is consistently ranked as a top-25 institution, world-renowned for its approach to education and research. Students become experts in fields ranging from business, the fine arts and computer science to humanities, the sciences and engineering. Whether students are in a lab, classroom or studio, left-brain and right-brain thinking unite within a collaborative, hands-on setting. Carnegie Mellon encourages students to think in new ways – to choose their program and change the world. Our students take full advantage of coursework, minors, and double majors in other units on campus in the 135 units of General Studies that are in their B.Arch curriculum. There are no institutional boundaries beyond a prerequisite structure and class availability. Our students definitely benefit from the CMU “brand”.

**The Integrative Design, Arts and Technology Network (IDeATe):** The Integrative Design, Arts and Technology Network (IDeATe) at CMU connects diverse strengths across CMU to advance education, research and creative practice in domains that merge technology and arts expertise. The IDeATe concentrations aim to train a student to be excellent in one area of technology or arts and be able to collaborate within diverse cohorts of technology and arts experts. To achieve this goal, IDeATe has sponsored the development of 30 new interdisciplinary technology-arts studio based courses. These studio classes are focused on hands on collaborative learning and are structured to combine students from many different disciplines. The curriculum is being developed and delivered by 65 faculty across 15 different academic units of CMU and being delivered at the new IDeATe collaborative making facility housed at the central Hunt Library. The IDeATe program has brought together CFA interdisciplinary faculty from SoA, Drama, Music, Art and Design that will lead to an increased number of interdisciplinary courses and activities in the future for CFA.

**College of Fine Arts:** There are specific challenges for our students to benefit from being in one of the five schools in the college. Given the conservatory training of Music and Drama based on competitive auditions and portfolios, our students are able to participate in “non - major” ensembles, but not double majors. In Design and Art (like SoA), we are very protective of our faculty:student ratios in studio making it difficult to cross register. That being said, our motivated students pursue their passions by taking advantage of multiple opportunities in the college i.e. guitar ensemble, photography, Playground, etc.

**The Frank-Ratchye STUDIO for Creative Inquiry (FRSfCI):** The Frank-Ratchye STUDIO for Creative Inquiry is a laboratory for atypical, anti-disciplinary, and inter-institutional research at the intersections of arts, science, technology and culture. The STUDIO is a flexible laboratory for new modes of arts research, production and presentation. Founded in 1989, the STUDIO serves as a locus for hybrid enterprises on the Carnegie Mellon campus, the Pittsburgh region, and internationally. Its current emphasis on new-media arts builds on more than two decades of experience hosting interdisciplinary artists in an environment enriched by world-class science and engineering departments. Through residencies and outreach programs, the STUDIO provides opportunities for learning, dialogue and research that lead to innovative breakthroughs, new policies, and the redefinition of the role of the arts in a quickly changing world.

*A description of how the program's course of study encourages the holistic development of young professionals through the integrated study of the liberal arts and the specific discipline of architecture.*

CMU's B.Arch was built from an ethos of combining professional training with interdisciplinary education. This is at the heart of our university and the post-professional master's programs in the SoA. By bringing together a diverse cohort, we seek to lay the foundations for them to create and inspire each other to understand a larger diversity of ideas, inspirations, and means of engagement within the world through architecture.

The 3+2 curriculum of our B.Arch program allows students to focus on professional and technical coursework in the first three years, and then offer a choice of Advanced Option Synthesis Studios (ASOS) and electives in the last two years. Students can choose between focusing within the traditional aspects of the discipline, or working in interdisciplinary or non-traditional topics, including coursework towards STEM-based masters programs in areas such as urbanism or sustainability. The small program size and careful mentoring allows students to determine their own path through the B.Arch, at the same time as the school assures the holistic development of young professionals through the integrated study of liberal arts and the specific disciplines of architecture.

The university mandates that each college establish the list of required university courses for each of their undergraduate programs. The College of Fine Arts has only two requirements - Computing @ Carnegie Mellon and Interpretation & Argument, offered by the English Department in the Dietrich College. Interpretation & Argument introduces first-year students to an advanced, inductive process for writing an argument from sources. Because the course is based upon empirical research about professional academic writers, students will learn expert practices for authoring their own arguments that contribute to an existing community of authors. Because reading and writing are inseparable practices for academic writing, students will read a variety of texts so that they can explore and critically evaluate a single issue from multiple perspectives and from different disciplinary genres. Students will learn methods for summarizing, synthesizing, and analyzing arguments within that issue so that they may contribute an argument of their own. The course is also geared toward helping students understand the requirements of advanced college-level writing.)

Believing that learning outside the SoA is critical, the SoA has added a series of required CFA interdisciplinary courses to this list:

*Exploring Pittsburgh, Generative Modeling and Fundamentals of Computational Design*

### I.1.2 Learning Culture

*In addition to the matters identified in the Condition, the program should be prepared to describe how studio culture addresses the values of time management, general health and well-being, work-school-life balance, and professional conduct. A description and assessment of the learning culture within the program.*

The learning culture of the B.Arch program has been built upon its long history, as well as that of the SoA and the university more broadly. CMU's "2025 Strategic Plan" states: "the university is committed to cultivating an active, technology-enhanced, 'know how to learn' environment where each individual can grow and thrive. We will remain dedicated to nurturing student, faculty, and staff growth in key areas such as deep disciplinary knowledge; leadership, communications, and interpersonal skills; as well as physical and emotional well-being. We will continue our focus on attracting a diverse and inclusive community of students, faculty, staff, and alumni willing to cross academic boundaries in a culture where innovation, entrepreneurial thinking, and action are valued and fostered."

The relatively small size of CMU, of the SoA, as well as a culture that promotes both interdisciplinarity and design thinking, allows us a great deal of personal contact from faculty to students, and from students in one program to the other, and even from one department to the next. Students are constantly interacting

with each other, as well as with faculty and staff in studios, but also in labs, classrooms, offices, as well as on the campus, in the Pittsburgh neighborhoods nearby, as well as further afield on study trips. Studios and classes frequently engage experts from outside the school, from the Pittsburgh area, and from farther away to deliver guest lectures, review studio projects, or interact in other professional ways with students. We strive to create a friendly, respectful, collaborative, and professional relationship across the entire community, from students to faculty to staff. Upper-level ASOS studios include master's level students for enriched learning and collaboration.

All CMU undergrad students are welcomed to, and introduced to the SoA from the first day of orientation. The SoA has specialized orientation activities for incoming architecture students. This work is supplemented by the year-long "Freshman Seminar", which focuses a great deal on establishing learning culture, and advice for a healthy, productive college life and architecture school experience.

The learning culture in the studios is guided by the "Studio Culture Policy," (described below) but also by the values of the community we seek to build in the SoA and at CMU, and constantly reiterated by the upper administration. In first year student orientation, faculty and staff outline the expectations and opportunities of the SoA curricula, but also the support services that are accessible through faculty and staff, SoA advising and mentoring programs, and especially university-led support services. Both the university and the School encourage instructors to include messages about health and wellness, but also about support services in all syllabi, and introductions to all courses. Learning culture policies are introduced and outlined to all students through various course and programmatic offerings in the SoA, including the First Year Seminar course, individual and group academic advising sessions for all current students, semester Ice Cream socials, semester town meetings, and special topic sessions as needed. Participation and engagement in these sessions are measured and evaluated to continually improve performance, delivery, and opportunities. Architecture students in the early part of the curriculum are guided in how to navigate not only their academic work, but also the many opportunities that come with being a college and graduate student. In studios, this includes issues of time management, finding ways to become "unstuck," managing between multiple design parameters and different feedback, teaching about collaboration and team building, and other tactics to help students become successful professionals.

The Faculty Mentor system has been established to create a platform for discussion of long term strategies as they develop in the emerging professionals in the field of Architecture. The CMU system engages our undergraduates in short term conversation, one semester at a time, with faculty with whom they are being taught by and by whom they are awarded grades. Continuity of discussion is provided by the department academic advisor but not by a person engaged with architecture. The faculty mentoring system that we are developing has been in operation for three years and we will be carrying out an assessment of the benefits and difficulties appreciated by both faculty and students at the end of semester in May 2018. Our system appoints three faculty each year to a group of 2nd year students who they meet with and monitor over their four years to graduation. Thus the faculty can become independent advocates for our students, be able to offer strategic advice through greater knowledge of the professional world and lastly create a sense of openness to listening. This is as important for our faculty as our students. Each faculty member devises individual methods of meeting to create dialogue and to sustain a long conversation. Annually we meet and compare these ideas. We send a reminder to all faculty in the system within weeks of the next semester registration to suggest meeting the students before they commit themselves to course selections.

All CMU students have access to learning and support services such as:

*Academic Coaching (<https://www.cmu.edu/acadev/programs/counseling/index.html>) that covers topics such as time management, effective work and study technique, etc. It also helps set up peer tutoring, and other supplemental instruction*

*Global Communications Center (<https://www.cmu.edu/gcc/>) a resource supporting students' efforts*

*to improve their communication skills and prepare for a complex global economy*

*Intercultural Communications Center (<https://www.cmu.edu/icc/>) to help non-native English speakers (NNES) improve the language and cultural skills needed to succeed in their academic programs*

*Counseling and Psychological Services (CaPS) (<https://www.cmu.edu/counseling/>)*

*Student Health Services (<https://www.cmu.edu/health-services/>), including wellness and fitness initiatives*

*A description of the program's Studio Culture Policy including By what means and how frequently the policy is distributed to faculty, students, and staff*

The official policies and aspirations of the learning culture, including the "Studio Culture Policy" (SCP), serve as supplements to the standards and policies that the university has adopted and established, and are described in The WORD (<https://www.cmu.edu/student-affairs/theword/>), the official handbook for members of the CMU community. The SoA's learning culture, alongside SoA mission, academic curriculum, academic policies, student opportunities, and valuable resources in SoA are detailed in the undergraduate and graduate student handbooks. CMU's current interim president and past president have helped guide some of the leading universities in the nation to establish standards and policies that promote diversity, tolerance, and a desire for international outlooks. The university ethos and policy states in part:

*"Carnegie Mellon is a community of diverse members committed to maintaining an environment that encourages personal and intellectual growth that promote our traditions of innovation, leadership, responsibility to society, learning, dedication, commitment to quality and commitment to each other. We are a community with high standards and high expectations for those who choose to become members, including established community standards intended to foster behavior that is consistent with a civil and educational setting. It is the responsibility of each community member to become familiar with the standards and expectations of the Carnegie Mellon community."*

The CMU School of Architecture's Policy on Studio Culture has been written by the school's chapter of the American Institute of Architecture Students (AIAS) to build a strong community that is inherently unique to the architecture studio environment. It is available to all in the student handbook. In the SoA "Studio Culture Policy", and indeed throughout the SoA, the philosophy is maintained that professionalism should be embodied by faculty, staff, and students and demonstrated in the work exhibited in a professional degree program. The SoA realizes that the studio is a 'melting pot' of sorts that contains these interactions and their outcomes. Therefore, as a premise for deriving the guidelines for studio culture, we embrace the idea of professionalism as means to instill positive and productive relationships between all parties present in architectural education. Under the heading of professionalism, the SoA supports core values that further emphasize the importance of collaborative engagement, critical interaction, and decision making within the studio environment:

*Critical Practice: Innovate, question, reevaluate, and redefine in order to push for forward thinking in the study and practice of architecture.*

*Process/Product: Demonstrate the ability to actively participate in studio by creating work that challenges oneself in his/her specific skill-set level. Contribute – to the best of one's abilities – a product that is well-developed based on the conceptual objectives assigned.*

*Critique: Promote constant interaction between students and faculty in the critical discussion of both precedent study and student. Engage in public discourse about architecture whether it be at a personal final critique, a gallery showing, or a town hall meeting.*

*Engagement: Understand and be committed to studio content, and take advantage of resources. Work to achieve personal and academic goals in an effort to learn more from your work and that of*

*your peers. Be present at every studio session as attendance and attentiveness are essential to success.*

*Communication: Voice suggestions, concerns, and opinions frequently. Have the judgement to understand on what level to communicate with peers and colleagues in all areas of architectural learning.*

*Respect: Be respectful of others - their ideas, work and philosophies. Embrace the diversity of our community with regard to: race, color, national origin, sex, handicap or disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information.*

*Integrity: Commitment to honesty without compromise, as well as truth without equivocation and a willingness to place the good of the community above the good of the self. Obligations, once undertaken, must be met and commitments kept. Official policies on academic integrity, including cheating and plagiarism are outlined in The WORD.*

Keeping in mind the overarching theme of professionalism, the official Studio Culture Policy sets forth in great detail the guidelines for the development of the curriculum, the grading policy, the crit and review policy, and the responsibility of the design process. It also sets forth expectations for professional student-faculty interactions, student-student interactions, as well as expectations about the conduct in various SoA facilities.

*An assessment of the level to which faculty, students, and staff understand the purposes for which the policy was established*

B.Arch students are introduced to the School's policy on studio culture during orientation and in first semester seminar as a part of the School of Architecture policy review. In seminar, students are quizzed on policies including the studio culture policy.

SoA faculty are encouraged to read and discuss the Studio Culture Policy and staff are part of the editing process for the SoA Handbook wherein the policy is written. The key staff are the Architecture Licensing Adviser, Alexis McCune Secosky and the First Year Seminar instructor, Heather Workinger Midgley,

*A description of the process by which the policy is evaluated and updated, including those involved and the frequency of the review.*

The Executive Board of the Carnegie Mellon chapter of American Institute of Architecture Students (AIAS) developed the studio culture policy in collaboration with the School of Architecture Head and AIAS staff advisor, and are responsible for assessing and updating the policy, in collaboration with the Student Advisory Council (SAC) and the Head of SoA. The undergraduate student handbook ([https://soa.cmu.edu/s/2017-18\\_SoA-Undergraduate-Student-Handbook.pdf](https://soa.cmu.edu/s/2017-18_SoA-Undergraduate-Student-Handbook.pdf)) which contains the Studio Culture Policy, is made available to all students/faculty/staff online and is evaluated through feedback from the SoA faculty, staff, and student advisory council (SAC), and updated annually.

### I.1.3 Social Equity

*A description of institutional initiatives for diversity and inclusion and how the program is engaged in or benefits from these initiatives*

Closely related to policies and aspirations for a positive learning culture are those related to guaranteeing social equity. The policies and aspirations related to social equity are promoted in the B.Arch program, as well as the SoA and CMU more generally.

Past President Suresh made it a top priority to improve the quality of life for all members of the CMU community, especially in matters of physical and mental health, equity, and inclusivity. CMU's new strategic plan includes 8 "values", of which three relate specifically to social equity: Empathy and

compassion, reflected in our focus on improving the human condition and on the personal development of the members of our community; Inclusion, reflected in a culture and climate that seeks, welcomes, and advances talented minds from diverse backgrounds; Integrity, reflected in our adherence to the highest ethical standards in personal and professional behavior and in our commitment to transparency and accountability in governance and everything we do. The SoA and the B.Arch program aspire to the same values.

CMU is committed to Equal Employment Opportunity and Affirmative Action (EEO/AA). The SoA is committed to the university's diversity efforts as published in Report of the Diversity Advisory Council January 2013. Specifically, the SoA supports the diversity of our students, faculty, staff, and community through a variety of efforts related to student admissions, faculty recruitment and staff recruitment. Recent SoA CBPD PhD graduate and newly appointed tenure-track assistant professor Erica Cochran Hameen represents the SoA on the University's Diversity Council.

*A description of plans to maintain or increase the diversity of faculty, staff, and students when compared with the diversity of the institution.*

Past President Suresh proposed creating a university-wide fund to help attract and retain the very best candidates in underrepresented groups. For students, the University has created a program of "Presidential Scholarships" for undergraduates and "Presidential Fellowships" for graduate students. These are intended to attract the very best students from around the world, including underrepresented groups. For faculty, the University provides training on unintentional bias, assistance writing unbiased job descriptions and HR Department assistance in evaluating candidates. Fundraising by the University to support hiring is underway.

The required portfolio reduces the emphasis on test scores and other admissions tools that often work against underrepresented groups. The SoA has been very successful in recruiting and enrolling women in the B.Arch program to the point where women have been the majority in all recent classes, and are always among the top students. (F17 entering class: 32 women/30 men, 45 domestic students/17 international students.) in Our NOMAS Chapter assists with portfolio reviews and CMU Celebration of Diversity events to increase matriculation of admitted students from diverse backgrounds.

**The Architecture Learning Network:** The Architecture Learning Network (ALN) is a partnership between architecture education organizations in the Pittsburgh region that aims to provide young people with multiple pathways and connections to the architecture profession. Currently, the eight (8) ALN organizations are:

*ACE High School Mentorship Program, Western PA chapter*

*Assemble*

*SoA's Center for Architecture Explorations (CAE)*

*Carnegie Museum of Art (CMOA)*

*Fallingwater*

*Pittsburgh History & Landmarks Foundation (PHLF)*

*University of Pittsburgh's Architectural Studies Program*

*Young Preservationist Association*

ALN is strengthening Pittsburgh's K-12 pipeline into the architecture profession by offering portfolio development and mentorship. Youth participating in ALN programs receive feedback and recognition for their architectural designs and are advised on future programs to pursue based on their interests and

experience. As a result, students become aware of a variety of inspiring architecture topics, develop advanced design skills over time, and learn about multiple ways to pursue a career in the building industry.

Although ALN is highly beneficial for young people pursuing a career in architecture, the ALN organizations focus broadly on fostering active citizens who care about the built environment and are knowledgeable about the design process. ALN has been recognized nationally through organizations such as the Association of Architecture Organizations and the Association of Collegiate Schools of Architecture who are supporting conversations about the K-12 architecture pipeline and see the potential for similar local networks to flourish in other cities.

The ALN is supported through a Remaking Learning Pathways grant from the Sprout Fund. Pittsburgh's local AIA chapter also supports ALN by marketing programs and recruiting practicing architects as teachers and mentors.

The SoA CAE offers four (4) programs to support our efforts to improve diversity:

***Architecture Explorations:*** A collection of programs for K-12 students reaches a wide range of students in an effort to develop interest in architecture and prepare interested students for undergraduate admission. The Saturday Program offers significant need-based scholarships to individual students. Academic workshops and after school programs serve a range of schools, including several schools with a majority of the student body eligible for the federal free- and reduced-fare lunch program. Architecture Building Communities, a free architecture and urban design summer program, reaches out to a local urban primary school and recruits diverse high school students from the region.

***Pre-College:*** Each summer, the university sponsors through full tuition, room and board, four or five diversity students into our six-week intensive Pre-College program. Upon the expression of a student's interest and ability, we will provide supplementary information in the form of recommendations to the Office of Admissions to promote enrollment. The SoA has admitted and matriculated several of these students.

***UDream (Urban Design Regional Employment Action for Minorities):*** Currently on hold in search for new funding.

*UDream provided recent graduates of architecture, landscape architecture, urban design and urban planning programs the opportunity to deepen their knowledge of urban design in a summer and fall immersion experience in real projects in a Pittsburgh neighborhood. Participants received free tuition, housing, bus passes, and a monthly stipend of \$1,000 for food and necessities from June to October. UDream began annually in June on the Carnegie Mellon University (CMU) campus with a five-week intense program of academic courses and studio work with an emphasis on urban design and sustainability, followed by a two-week mentoring program in July with local high school students. Senior CMU architecture faculty and experienced local urban design practitioners taught the courses and design studio. The academic and community engagement program was followed by a twelve-week internship at an urban design or architectural firm, public agency, or nonprofit organization engaged in planning and community development. Each year two graduates of the UDream program are admitted to the Master of Urban Design program with full scholarships and stipends. The goal of UDream is to increase diversity in the profession of urban design nationally, and in the Pittsburgh region specifically, by offering opportunities for permanent employment in Pittsburgh. In 2009 there were only five practicing minority architects in Pittsburgh. Now there are well over thirty. Unfortunately, the Heinz Endowments, our primary source of UDream funding, shifted its priorities and did not continue their funding this year. The Remaking Cities Institute team working with CFA and university advancement are looking for new funding sources.*

***AIA Diversity Recognition Program:*** In 2015, UDream was recognized by the AIA at its Grassroots Leadership and Legislative Conference for its innovative methods to diversify Pittsburgh's urban

design workforce. Multiple Architectural and Urban Design firms in Pittsburgh wrote impassioned and inspiring letters of support to the AIA identifying the impact that UDream has on the City of Pittsburgh, especially at the local community and neighborhoods level.

**National Organization of Minority Architects:** The UDream participants reinstated the local chapter of the National Organization of Minority Architects (NOMA) in Pittsburgh. NOMA's mission is to "champion diversity within the design professions by promoting the excellence, community engagement, and professional development of its members." The influx of minority Architects and Architecture school graduates revitalized the chapter which previously lost its charter due to a lack of membership and minority Architects in Pittsburgh. UDream Alumni hold several executive board and committee chair positions in the local NOMA Pittsburgh Chapter and the National NOMA executive board.

Additionally, due to the dedication of the UDream alumni, CMU Faculty and local Pittsburgh Architects CMU was able to establish our first Student NOMA chapter (NOMAS). NOMAS members are focused on fostering communication, professional development, and fellowship among students while celebrating the benefits of a diverse profession. The NOMAS student body includes those who identify as minority based on race, nationality, sex, sexual orientation, or wealth, or who share the chapter's goals.

NOMA members are dedicated to helping CMU NOMAS members prepare for the profession. During the 2016-17 academic year, CMU Faculty hosted and sponsored more than half the NOMA general body meetings. CMU students regularly attended the meetings and identified programs and initiatives to help NOMAS student academic and professional success.

CMU continues to engage NOMA to assist with diversity efforts by participating in the annual national conference by sponsoring UDream alumni and students so that they can attend the conference, serving on the panel of educational sessions, and participating in the college fair to increase minority enrolment of both the undergraduate and graduate schools. CMU also posts various opportunities on the NOMA national website to encourage minority involvement in our diversity endeavors.

*A description of the process by which these plans are developed and the individuals involved in the process.  
A description of whether and how these initiatives are linked to the program's self- assessment or long-range planning.*

To further the Department's diversity initiatives, CMU faculty serve on the board of multiple diversity focused initiatives on the college and university level.

**College of Fine Arts (CFA) Diversity Liaisons:** CFA established a Diversity Liaison board whose goal is to 1) provide assistance to the college and all departments during all faculty searches to ensure a diverse pool of applicants, and 2) identify short and long term goals and solutions to improve faculty diversity, inclusion and retention throughout the college. The board which represents five departments, is comprised of the CFA Associate Dean and two Full Time faculty members. Assistant Professor Erica Cochran Hameen, PhD from the school of Architecture serves as a board member. Recently, the CFA diversity liaison board conducted a survey to document faculty understanding of the process to conduct effective and inclusive faculty searches. The survey results will assist the Dean, Department Heads and diversity board by identifying gaps in faculty understanding of policy and programs geared towards improving diversity and inclusion.

**University Faculty Diversity, Inclusion and Development Committee:** As Provost, Interim President Farnam Jahanian charged a faculty committee to advise him on how we might best recruit and retain a diverse, world-class faculty in order to gain insight into the challenges and opportunities of diversity on the CMU campus. The committee is now broadening its scope to include work on enhancing faculty climate, promoting diversity and inclusion, and creating development opportunities. School of Architecture Assistant Professor Erica Cochran Hameen, PhD was nominated and currently serves on this select committee of eleven faculty members. The committee



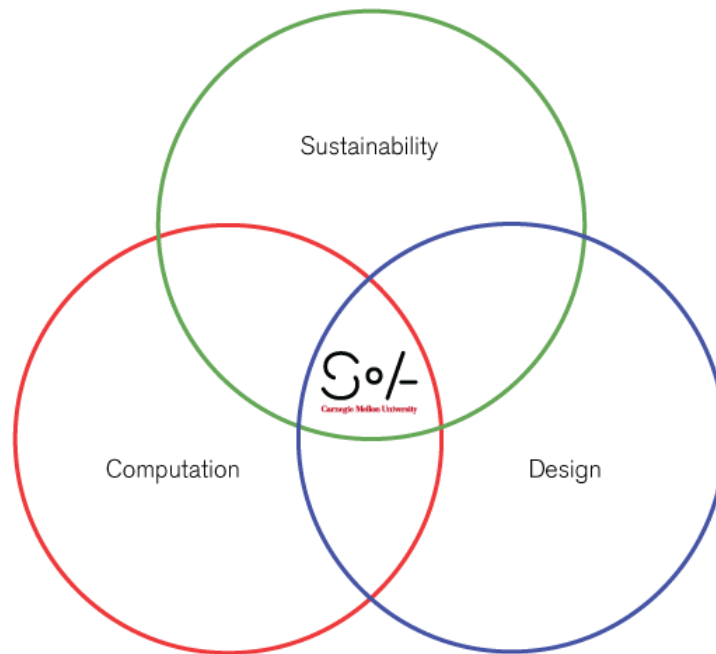
*meets bi-monthly to identify challenges and provide solutions to diversity and inclusion among faculty, staff and students across the campus. Recently, the committee issues CMU's first Diversity and Inclusion Mapping Project which is a collaborative, campus-wide effort to gather information about diversity and inclusion work at Carnegie Mellon. The purpose of the survey is to document diversity initiatives in all departments to increase the awareness and foster collaborative opportunities. Participation in the committee and the survey results provides direct knowledge to the Architecture Department on programs in other departments where we can collaborate diversity efforts to strengthen the success. The Diversity Committee with participation from Architecture faculty is also engaged in multiple funding opportunities focused on diversity and inclusion.*

**University Diversity & Inclusion efforts:** *CMU recently launched a diversity and inclusion website (<https://www.cmu.edu/diversity/>) to help students, faculty and staff discover advancement opportunities, share experiences, learn new perspectives, build support networks, engage with the community and more. The website also provides a list of "Advocated in the Community" who serve as diversity and inclusion champions at every level across campus. Architecture Assistant Professor Erica Cochran Hameen, PhD serves as an "Advocate" to provide support to students, staff and faculty in the Architecture Department and throughout the campus. By collaborating with University wide efforts, the School of Architecture is able to increase our reach and expand the diversity efforts by utilizing university resources.*

### I.1.4 Defining Perspectives

*The perspectives offer programs the opportunity to define the means and methods most appropriate to their mission, history, and pedagogy to prepare students with a set of core values that are essential and fundamental to the practice of architecture. These values are held as perspectives instead of SPC, as they must transcend any one course and must be over-arching across the program. Notes on the Perspectives should include:*

- A description of the program's approach to each of the five perspectives.
- Identification of individual courses, curricular and co-curricular activities, or learning experiences/opportunities available to students to develop the knowledge, skills, or understandings described in each perspective.
- A description of how the perspectives inform or support some or all of the following activities (not inclusive): Learning culture; Curriculum design, review, and development; Specific course review, development, or revision; Off-campus, extracurricular, or co-curricular learning experiences (e.g., field trips, service projects, student organizations, or design centers); Long-range planning for the program; Self-assessment activities for the program.



**Within these Frameworks, the SoA Integrates Education,  
Practice & Research to Enhance the Built Environment**

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

*The program should address this perspective by describing how students develop the interpersonal skills for fostering team unity, communication and decision-making, conflict resolution, cultural awareness and empathy, and the motivating purposes to effectively achieve commonly held goals, and where those skills are being taught/demonstrated. Graduates should be prepared to function in a diverse world of practice with the ability to adapt to complex team situations and effectively address a climate of shifting priorities. This perspective also includes how a program prepares emerging professionals to 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. This condition can be satisfied by demonstrating how students lead and collaborate across multiple opportunities ranging from structured coursework opportunities to program activities and events and external programs and events.*

Collaboration, and with it the opportunity for leadership, go along with the importance of being a responsible partner or teammate. These attributes are at the very core of the B.Arch, the SoA, and the university more generally. The university's strong culture of interdisciplinary thinking, communal inquiry, and collaborative research across the disciplines foregrounds these values from the top down. As a

school we value initiative in our students, and strive to create opportunities for them to shape their own education, both individually, and through collaboration, to become leaders in the community. SoA students lead and organize strong chapters of the American Institute of Architecture Students (AIAS), as well as the National Organization for Minority Architecture Students (NOMAS). The AIA awards the Alpha Rho Chi medal for the highest level of student leadership.

Founded by a group of students in 2011, *inter•punct* is a platform for ideas, theory, and discourse - sometimes about architecture and sometimes at its periphery. Since its inception, *inter•punct* has self-published two volumes, *para-meter* (2013) and *inter-view* (2016). Both volumes reached widespread audiences and can be found for sale at multiple bookstores internationally. In the spirit of collaboration and knowledge-sharing, the group publishes smaller newsletters more frequently, distributing them to students, staff, and faculty, spurring them to think critically and investigate contemporary architectural theory and practice.

At both the undergraduate and graduate levels, students are encouraged to pursue courses in other departments, promote interdisciplinary agendas, collaborate in joint research projects, seek outside advising, etc. The relatively small size of the SoA allows students direct access to leading experts in the field and all the advanced facilities, as well as a great deal of latitude in determining their education.

We see the architectural studio not just a place, or a course, but also a collaborative way of learning and thinking. In a recent renovation we tore down walls separating studios in order to promote more interactivity between studios, students, and instructors. We have completed the process of phasing out separate computer clusters, in part to integrate that work flow more seamlessly into the studio culture. Although the academy has often foregrounded the experience of the individual learner, and the master-apprentice model of studio education has long been a staple of architectural education, SoA aims to move towards other more collaborative models of learning and teaching, practicing and researching. Nearly every studio contains group projects, as well as individual ones. Although it is often difficult for students, an explicit part of the pedagogy includes collaborating in the design process, effectively achieving commonly held goals, conflict resolution, sharing work, responsibility, and success.

An embrace of diverse viewpoints and community engagement is an explicit part of several studios and courses, including the *Exploring Pittsburgh* course, the 2nd year studio on urban agriculture, and the *Case Studies in Architecture and Cities* course that gets students out in the community. The Urban Design Build Studio (UDBS) is focused on the idea of public interest design, and includes extensive work with local tradesmen, residents and community leaders, often from disenfranchised communities, as well as grant agencies. The Master of Urban Design program, which helped establish the practice of participatory design, as well as the urban focused studios in the ASO years almost always feature close collaboration with multiple stakeholders in the community. The larger ethos of sustainability that is a core value of SoA encourages students to understand all things as part of larger systems and ecologies that are interdependent, and thus the architect or any one person or group as just one of many participants in a larger process of enacting change, at any scale.

The collaborative team approach also extends to teaching: the first six studios are all coordinated by a full-time, tenure-track faculty member, who leads other instructors in ways that allow students to recognize both leadership and shared values and ideas. In the freshman year, the spring studio includes team-teaching, where students are taught by a team of three equal co-instructors, and thus learn to balance different kinds of feedback. In several studios, including the *Advanced Construction* studio, consultants from the profession, community, and/or SoA are brought in and integrated into the teaching to help students understand the value of different expertise in our collaborative profession.

Financially and administratively, CMU strives to promote a “bottom up” approach to initiating projects and developing leadership in specific, strategic areas of focus. The administrative and financial structures of the university grant great autonomy to the Head of SoA about programs and financing, allowing faculty of the School to initiate many new projects, often including students. The university provides small grant

programs for undergraduates and graduate students to initiate both individual and collaborative research and educational projects, including Graduate Small project Help (GuSH) Research Grant, Graduate Student Conference Funds, student taught courses (StuCo), and university-wide student-run interdisciplinary events such as “Lunar Gala” fashion and design show. Architecture students are included in many aspects of the administration and business of the school. They are part of the admissions process, and through the Student Advisory Council (SAC) have direct access to the Head, and can demonstrate both leadership and collaboration as we work together to improve the SoA.

## **B. Design**

*Programs should describe how graduates are prepared to engage in design activity as a multi-stage process aimed to address increasingly complex problems, and provide value and an improved future. This includes how students learn the combinations of methods, skills and cognitive processes, as well as identifying and framing problems from a complex milieu; generative and evaluative strategies; cycles of conjecture, implementation and evaluation; methods of research, technical expertise, skillful action and judgment.*

Design is at the forefront of the core values of the B.Arch program, with: 1) a deep conviction about the unique disciplinary knowledge of the architect, and the power of design and *architectural thinking* to improve both society and our planet; 2) a studio culture that promotes the values of speculation, critical thinking, and research that lead to innovative architectural solutions within the built environment; 3) a relentless focus and insistence on good design; design excellence at the center of all work; 4) the development of integrative design thinking within a collaborative studio environment, promoting understanding of the design process as the primary means of synthesizing many forms of expertise, knowledge and learning; 5) a commitment to teaching and inculcating design thinking as an iterative, reflective decision-making process to solve problems and discover new opportunities needed to be an influential professional; 6) an emphasis on future oriented, digital workflows and the integration of computation, systems analysis, and data into the creative design process so that computation becomes more than a technique or tool, it changes how we design, and in the process supports the collaboration and the exchange of knowledge among many programs and disciplines.

Although CMU has been training professional architects for over a century, always with design as the center of their expertise, SoA’s graduate programs, some of the oldest and respected in the country, have focused more heavily on research into technical, scientific, and STEM-based areas of the discipline. As a result, the SoA recently reorganized its graduate program structure to acknowledge the different attitudes towards design, distinguishing the STEM-based graduate programs (MSSD, MSBPD, MSCD, MSAECM, MTID), from the Studio-based programs (M.Arch, MUD, MAAD).

Another major curricular reorganization involved turning from a sequence of 10 themed studios from beginning design to urbanism for the B.Arch, to one based on architectural thinking: year 1 is *Foundation*, year 2 is *Elaboration* and year 3 is *Integration*, including the Advanced Construction studio that partially fulfills the requirements of NAAB Realm: C. In the last two years the students choose from a suite of vertically integrated *Advanced Synthesis Option Studios* (ASOS). Underlying this design pedagogy is our conviction that design is best learned through projects in which many kinds of knowledge and thinking are integrated into a constantly iterative process of action and reflection.

The suite of ASO studios offered each semester integrates upper level B.Arch students with students from each of the graduate Studio-based programs: urban design (MUD), advanced design (MAAD), and the new M.Arch students, beginning to simulate office teams where people with varying backgrounds and expertise work together towards shared design goals.

## **C. Professional Opportunity**

*As programs reflect their approach to preparing students for traditional settings responding to this perspective includes how students are prepared for the transition to internship and licensure; with an understanding of the requirements for registration in the jurisdiction in which the program is located; and with the information needed to enroll in the Intern Development Program (IDP). For programs with students preparing for other-than-traditional settings this should include how programs develop*

*students' understanding of alternative roles for architects in the building industry (e.g., developer, owner's representative, program manager, or civic leader), as well as roles in numerous other disciplines where architectural expertise is highly valued.*

CMU and the SoA have been educating architects for the profession for over a hundred years, and remain committed to doing so. Training the next generation of professionals for industry and practice was at the heart of Andrew Carnegie's vision for the school, and continues to be central to the mission of SoA and CMU more generally. Both seek to have a real, transformative impact on society through continual innovation and the solutions of real problems in education, research, creativity, and entrepreneurship. The B.Arch program has strived in part to strengthen the professional architecture community in the region and the City, to encourage and enable more people from the area to study architecture, and have a better chance of retaining them in Pittsburgh. The local AIA has been an enthusiastic supporter of the SoA.

Every studio at Carnegie Mellon focuses at least one project on buildings and the professional architectural design process. The *Materials & Assembly*, *Ethics & Practice*, and *Real Estate Design & Development* courses together with the *Advanced Construction Studio* all take as their primary subject matter the requirements of the profession and licensure. Many of the studio teaching instructors are professional architects from the community who not only teach design and offer feedback, but help inculcate a sense of professionalism in the studios and work. In recent years we have also made a conscious push to create new special faculty with the position of *Studio Professor*, as well as tenuring our first (this century) full-time professional architect, all of whom bring relevant, current professional experience to our students.

Although the B.Arch and many of the master's programs were built to provide education and innovation for the traditional architecture profession and building construction industry, we find that an increasing number of our students are interested in pursuing interdisciplinary work here at CMU, as well as after they graduate. In addition to the architecture profession, recent graduates have gone on to work for software companies, fabrication facilities, entertainment technology companies, government agencies, and have chosen to pursue further studies in graduate programs in urbanism, landscape, computational design, and more general design studies.

Students are encouraged to look for internship and employment opportunities that can make use of their skills already after the first year. Alexis McCune Secosky, the SoA Architect Licensing Advisor is responsible for helping students understand and then engage in the *Architectural Experience Program* (AXP), as well as the steps to licensure. She covers those as a guest in 1st year seminar. In 2017, the SoA appointed Kristen Frambes as Alumni Relations and Career Adviser. She connects current students seeking employment opportunities to alumni with open job positions available at their firms and continually solicits the attention of students through career fairs and a regular newsletter with job opportunities called Opportunity Knocks. Kristen also forges close alliances and connections with the CMU Career Center, where a specialist also works with architecture students.

We have planned our first ever panel discussion, *MY ARCHITECTURE | A discussion on architectural careers in the creative arts* as part of the fall 2017 SoA lecture series. It features SoA alumnus Jonathan Tolbert, the director of the AIA Center for Emerging Professionals (CEP) and four young architects that have pursued different careers with their architecture degree.

Although we do not offer a guaranteed job placement program, the SoA has created a series of arrangements with prestigious firms such as SOM, KPF, Payette and others to take one or more current CMU students for summer internships, which often translate into employment after graduation. In recent years nearly all grads have been able to find employment readily in the profession of area of their choice.

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

*This includes teaching design practices that seek to minimize negative environmental impact and to connect people with the*

*natural environment. The program's approach may also include individual courses that develop a student's understanding of climate, geography and other natural characteristics and phenomena. Further, these courses may also include content on the laws and practices governing architects and the built environment as well as the ethos of sustainable practices. Finally, the program's approach may also include opportunities for students to engage in political advocacy on environmental issues; involvement in organizations for a sustainable future; or participation and leadership in university initiatives supporting environmental awareness and sustainability.*

CMU SoA has been a world leader in researching, teaching, and practicing sustainable design in architecture and urbanism around the world for over four decades. We see architecture's complex relationship to energy and natural resources as perhaps the single most important issue facing our planet and civilization. Our design studios, at both the graduate and undergraduate levels, all understand sustainability as a basic premise for all building and planning, and are eager to promote and support innovation and speculation in the field. Our graduate PhD and masters' programs in Building Performance & Diagnostics (BPD) and Sustainable Design (SD) have long led the world in advanced building technologies that sustainably reshape the built environment. "Sustainability" was our passion and expertise long before it became a buzzword. Graduate students in our sustainability-focused programs work side-by-side in the Robert L. Preger Intelligent Workplace, benefitting from one another's experiences and being inspired by the hands-on laboratory environment.

Graduate programs at CMU are characterized by international students and, within the SoA, by a blend of national and international faculty. This rich mix heightens the awareness that sustainability is contextual. The varying distribution of natural resources and human populations around the globe requires that designers have the ability to think critically about sustainability in context and to design sustainably in that context. The University and the SoA understand that rapid global development, ongoing population increases and the concomitant pressures on natural resources and atmospheric health mean that tomorrow's graduates will face different and perhaps more intense challenges than we do today. As a result, faculty within the SoA and across the campus strive to heighten students' understanding of the interaction between human development and the environment and to hone critical analysis and solution-seeking skills.

Overall, the faculty within the SoA approach sustainability within the broad categories found in US and global building rating systems, examining the interplay between buildings and the environment with respect to transportation; the physical site, its environmental qualities and future potential for flooding; water resources; materials use, durability and disposal; energy resources and their carbon intensity; and indoor environmental quality. Quantitative and qualitative analysis of the current built environment is emphasized through the use of increasingly affordable meters, sensors and intelligent controllers. The use of software for community mapping, integrated design and building performance modeling, and system performance feedback and control are emphasized. Because US building codes are moving toward zero energy capable buildings, these codes are introduced, but these codes are also compared with code requirements, or their absence, in other countries in which students are likely to live and practice.

The Master of Science in Sustainable Design program is a post-professional degree intended for recent graduates and practicing professionals who seek to gain expertise in sustainable design methodologies and return to professional work in a short time. This intensive 12-month curriculum stresses the importance and value of total-building performance, human-centered design and the integration of Design, Technology and Construction knowledge and experience. Classes provide both depth and breadth, while the culminating Synthesis Project allows each individual student the opportunity to narrow his or her research focus to a topic of personal interest.

The Building Performance & Diagnostics degree program is intended for practitioners, researchers, and educators in architecture and the building industry who wish to be leaders in advanced building technologies and their performance. It is a research-based and research-oriented program, best for those ultimately interested in pursuing a PhD in building performance.

In the B.Arch program, fundamental building science principles are introduced in *Building Physics*, a first year course that helps students understand, simulate, and begin to draw design principles around issues of heat and light. Ideas about ecology and nested systems of environments, both natural and human, are introduced in the second year. Two *Environmental Science* courses are required, one focused on passive systems and mostly at a smaller scale, the other on more technical advanced systems integration in larger scale buildings. The fall 3rd year required studio *Integration I: Environment, Form, and Feedback*, focuses on systemic design thinking linked to the development of forms and organizations in large scale urban environments. Engaging processes such as climate data, daylighting and water flow, students move away from the design of discrete buildings toward architectural interventions that spans across scales to give new shape to the contemporary city edge. The spring *Integration II: Advanced Construction Studio* that follows, is concerned with advanced systems integration, and focuses heavily on building performance. Students have the chance to deepen their expertise in the sustainability or urban ecology based ASOS studios that focus on such issues as urban resiliency and energy sustainability.

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

*The social responsibility of architects lies in part in the belief that architects can create better places, and further 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, conservation or changes to the built and natural environment. Addressing this perspective could include examples of public and community projects/programs outside of coursework, or as structured elements within coursework.*

At the core of our philosophy is a belief that architects must serve the interests of the general public, the local community, and the specific clients and users of the project, and furthermore that the design process must include them as well as other major stakeholders in identifying problems and needs, in proposing new solutions and working out compromises in the decision-making process, and where possible, be involved in the implementation and even construction of the architectural or urban project. Only through this participatory process will the public interest truly be served.

The SoA helped pioneer the practice of “*participatory design*” and community engagement in the design process as far back as the 1960s, when Prof. David Lewis began one of the first programs in urban design in the world. Through the long standing Master of Urban Design (MUD), as well as decades of required coursework and studios in the B.Arch curriculum, this ethos of urban design has been at the core of our professional architecture education at CMU. Our programs have always considered the City of Pittsburgh as well as the surrounding communities and region to be an “*urban laboratory*,” where new and established methods can be practiced in collaboration with local citizens and organizations.

The majority of core studios of the SoA feature sites in and around Pittsburgh to be sure that students visit and think concretely about the impact of architecture on the community. First year students now take a course, *Exploring Pittsburgh*, introducing them to, and helping them learn to *read* the many diverse neighborhoods of Pittsburgh in a sophisticated, and community-oriented manner. The required survey of world history course is based on the idea that architecture is but one expression and output of community and human habits, and students learn early to see architecture as culturally constructed. Our B.Arch students are currently exposed to the principles of urban design as early as the 2nd year studio, where they work on projects related to urban agriculture at several scales, and engage directly with the community. Students design and fabricate a small “hoop house,” or miniature greenhouse for local community gardens, and interact with the community both to understand their needs, and to evaluate the work.

A specialized part of CMU SoA's work in public interest design occurs through the Urban Design Build Studio (UDBS), a collaborative of students, professors, and allied professionals who work with community residents on implementation of appropriate, affordable, replicable design solutions. The UDBS has established Project\_RE, an off-campus work and meeting space, with our partners Construction Junction

(CJ) and the Trade Institute of Pittsburgh (TIP). CJ is a large architectural salvage operation that works with communities to save and recycle the heritage of Pittsburgh's communities. TIP invests in the formerly incarcerated – building skills and self-respect through counseling and coursework. Through grants from Pittsburgh-based foundations, UDBS and Project\_RE have been able to garner substantial funding to design and build an ever increasing list of projects in various communities around Pittsburgh, always in collaboration with the local community, and always with the best practices of community design.

### I.1.5 Long-Range Planning

*The APR must include:*

*A description of the process by which the program identifies its objectives for student learning*

*A description of the data and information sources used to inform the development of these objectives.*

*A description of the role of long-range planning in other programmatic and institutional planning initiatives.*

*A description of the role the five perspectives play in long-range planning.*

**Student Learning:** We have a diverse faculty - educators, practitioners and researchers - that are enthusiastically engaged in the field as well as articulate (demanding), diverse Generation Z students. The SoA is guided externally by the NAAB learning objectives as well as the MSCHE self-accreditation process. We rely on anecdotal feedback from alumni and those firms that hire our graduates to assess our success. The formal internal structures that are in place for long range planning include the studio committees (Core 6 and ASOS), the thematic committees (Sustainable, Computational and Urban), the Full Time Faculty Committee, the College Council, the Carnegie Mellon Presidential Advisory Board process and to a certain extent, the School Review Committee (SRC) for reappointment, promotion and tenure. Engaging students in this process of long range planning includes the monthly Student Advisory Council meetings and the University-wide Faculty Course Evaluation (FCE) process. The Eberly Center for Teaching Excellence and Educational Innovation (<https://www.cmu.edu/teaching/>) brings pedagogical and technological issues together to support Carnegie Mellon faculty and graduate students in their roles as educators. Both newly hired and experienced SoA faculty take advantage of the services offered by Eberly.

**Data:** Our long range planning process related to student learning relies upon semester by semester Faculty-Course Evaluation (FCE) data, reports from Office of Institutional Research and Analysis (<https://www.cmu.edu/ira/>) and continuous benchmarking against our peer institutions.

**Other Initiatives - Graduate Programs:** The tenure-track faculty that are track chairs for our graduate programs discuss the need for revisions/additions and/or deletions from our mix of eight master-level programs. The M.Arch (F17 candidacy) was the newest program to be added and this emerged from our strategic plan and extensive discussions at our annual fall faculty retreats. Any new programs or major revisions to existing programs need to be formally presented and approved by the College Council. New programs also go through an extensive vetting process by the Vice Provost for Education.

**Other Initiatives - Space:** The SoA head functions as the school space planner and is in charge of the Margaret Morrison Extension (MMX) Committee for the Dean. There has been NO new square footage added to the SoA since the last NAAB visit. Consequently, the space planning consists of an endless shell game trying to match cohort sizes to square footage and the re-design of workstations and layouts to use the space we have more efficiently.

### Overview of the Carnegie Mellon Strategic Planning Process:

Quoting directly from the university website, "*The 2015 strategic planning process was an enormous effort—one that sought to meaningfully engage all voices from the CMU community and to thoughtfully consider and synthesize their input. The process spanned the academic year from October 2014 through the summer of 2015, and the campus continues to engage in implementation activities and regular updates to the plan. Key accomplishments include the following:*



*Hosting more than a dozen town hall meetings and retreats with unprecedented attendance and interest, in person and via webcast, including open sessions; sessions focused on particular topics such as diversity, international strategy, and teaching and learning; and smaller sessions with university leadership and the Board of Trustees.*

*Delivering countless presentations to campus groups, departments, schools, administrative units, and other interested parties to gather feedback on the plan.*

*Engaging more than 160 campus community members (faculty, staff, students, and alumni) on strategic planning committees that have shaped key elements of the plan.*

*Focusing on key community members outside the Pittsburgh campus to gather the broadest possible input, including CMU locations in Silicon Valley, Australia, Qatar, and Rwanda.”*

The entire plan for 2025 can be found here: <https://www.cmu.edu/strategic-plan/>. SoA faculty, staff and students were strongly encouraged to attend sessions to make their voice heard.

**Five Perspectives:** With the SoA focus on three “specializations” integrated into our five year curriculum - sustainability, computation and design - there is meaningful overlap with all five perspectives embracing aspects of education, practice and research. One perspective that is clearly missing from NAAB’s list is one that addresses the future of computing in the profession - data analytics, visualization, simulation, fabrication, VR/AR, etc. Given the extreme importance of this domain, we have a committee devoted to planning in this area.

#### I.1.6.A Program Self-Assessment

*The APR must include the following:*

*A description of the program’s self-assessment process, specifically with regard to ongoing evaluation of the program’s mission and multi-year planning objectives.*

*A description of the manner in which results from program self-assessment activities are used to inform long-range planning, curriculum development, learning culture, and responses to external pressures or challenges to the institution.*

*At a minimum, program self-assessment procedures shall include, but are not limited to:*

*Solicitation of faculty, students’, and graduates’ views on the teaching, learning and achievement opportunities provided by the curriculum, Individual course evaluations, Review and assessment of the focus and pedagogy of the program, Institutional and program-level self-assessment, as determined by the institution.*

The SoA is constantly self-assessing and evaluating the performance of its faculty, staff and students, its long-range strategic direction and progress in relation to previously set goals, as well as to the external environment around it in the College, at the University, in the profession and in the world at large. Long term strategic planning and visioning grows out of this ongoing self-assessment process.

CMU is a very “bottom up” institution. Heads of schools are given a great deal of authority to decide on program details, and a great deal of control over the finances of their unit. As a result, there are few “top-down” directives or imperatives, and few top-down assessments. The University as a whole is assessed and accredited through a voluntary, peer-review self-assessment process coordinated by the Middle States Commission on Higher Education (MSCHE). At its session on 21 November 2013, MSCHE accepted the Periodic Review Report, reaffirmed the accreditation and commended Carnegie Mellon for the quality of the process and the report. See the section “II.2.1. Institutional Accreditation” below.

CMU’s Presidential Advisory Board (PAB) process is a standard self-assessment tool used by the CMU President and Provost to evaluate all units on campus. Previous PAB visits occurred in 2001 and 2007. The Presidential Advisory Board last visited the SoA in February 2014 and issued its report dated December 2014. The 2014 report summarized the assessment process and succinctly stated the major strengths, challenges and long-range recommendations that the SoA has used to help guide long term

hiring goals and curricular development. Among other things, the 2014 report advised the SoA to create a M.Arch program. The school provided a written response in coordination with the Provost's office in May 2015. The Interim President has not announced his plans for the PAB going forward.

CMU has long used a Faculty Course Evaluation (FCE) system for students to evaluate the quality of courses and instructors. FCE's are used to improve the quality of teaching and learning at Carnegie Mellon through feedback to individual faculty member, promotion committees and the Head for adjunct hiring. Responses to the FCE provide information on students' perceptions of their engagement, learning outcomes, the instructor's behavior and course activities. This feedback helps guide changes in future iterations of the course and/or the instructor's teaching.

The NAAB accreditation process forms another layer of institutional assessment, and invariably includes a great deal of self-assessment. The last B.Arch NAAB accreditation process took place in 2012. It noted strengths, as well as weaknesses. These weaknesses are re-investigated every year, and the APR reports document efforts towards remediating deficiencies or weaknesses.

These more formal self-assessment efforts overlap with ongoing discussions about the performance of the school and our students. The studio coordinators meet several times each semester to discuss the status and direction of the studio sequence. At the end of every academic year they host an all-faculty discussion of the studio sequence, with examples of student work displayed, to gather feedback on each studio year and to discuss how closely the student work fits with the faculty's expectations.

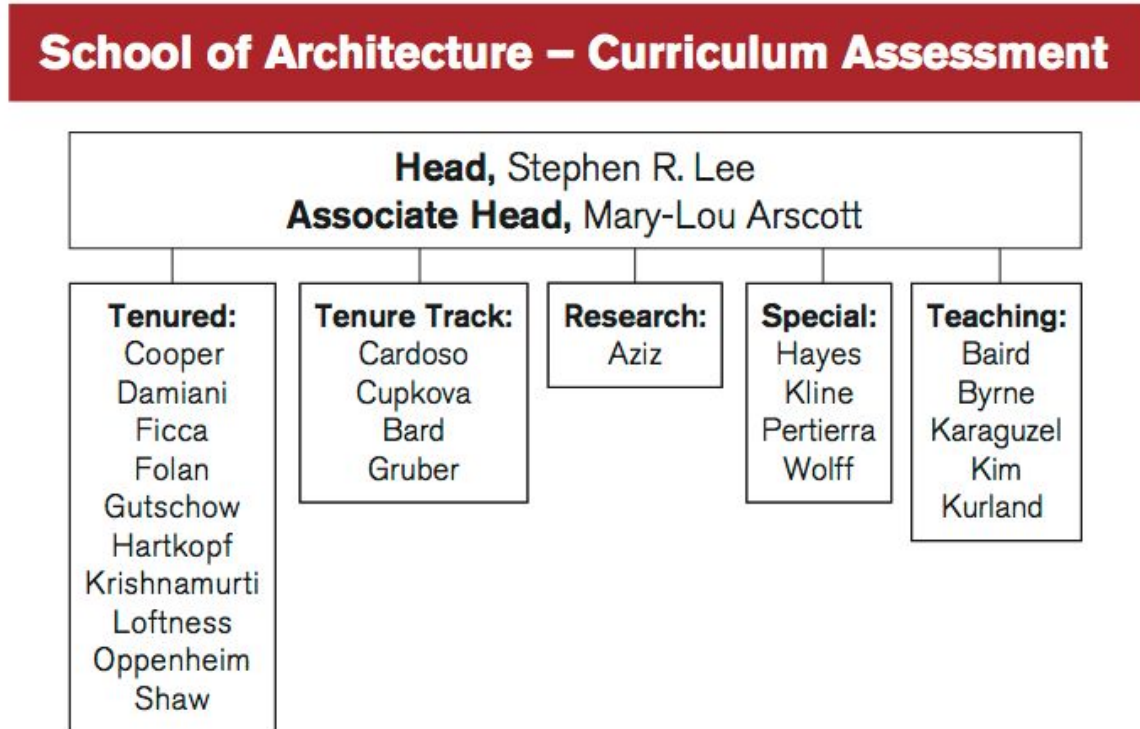
Every spring, as part of its awards program, the SoA requests that the best students in the class create individual exhibits on four years of their work. Faculty as well as outside professionals from the local AIA are invited to assess and rank the student work exhibits. Voting and discussion leads to the awarding of prestigious travel grants for the students, but also to a rigorous discussion on the state of the student work and by implication the teaching and learning that is taking place with respect to the SoA's goals, but also the profession's needs.

In addition to these SoA and faculty assessment tools, the Student Advisory Committee (SAC), which consists of three undergraduate representatives from each year of the B.Arch, the President of AIAS, and the President of NOMAS meets monthly with the Head and staff to discuss issues of concern to the students, including feedback on instructors, courses, facilities and other academic and non-academic opportunities. Their assessment is used to help shape the policy and programs of the school.

With the hiring of a new full time communications manager, Meredith Marsh, we have started an annual survey to collect feedback and input from alumni and current students to assess the impact of the school's initiatives. Online survey forms are developed and sent to school alumni and current students in both the undergraduate and graduate programs. Feedback collected through these surveys is used to inform the program's long-range planning. The first responses starting coming in during July 2017 and by the time of the NAAB visit in March 2018, we should have good assessment data.

I.1.6.B Curricular Assessment and Development

A chart identifying all the parties in the curricular assessment process, their membership (if necessary), and the roles and responsibilities of each.



The SoA relies on the following process for curricular assessment. Faculty that teach in each stream - studio (Core 6 + ASO), media, history, practice, building technology, environmental science and general studies - continuously assess the effectiveness of their teaching and the effectiveness of the stream course sequence against their historical learning objectives, as well as, their perceptions of learning objectives looking to the future. The head is simultaneously assessing these issues as well. If a stream wants to make a change, it is discussed in the monthly full time faculty meetings and the new meetings around sustainability, computation and design.

The head devotes a period of time at every Student Advisory Council (SAC) meeting to gain student feedback on current curriculum and desired revisions. If the students are requesting change, the head presents these requests to the streams for their deliberation and recommendation.

If a consensus exists, the head and the senior academic adviser consider the implications of the change in terms of staffing, scheduling and upstream and downstream issues. Once the change is made, the curriculum chart is revised and published and the audit algorithm at the Registrar is updated.

*A description of the results of faculty, students', and graduates' assessments of the accredited degree program's curriculum and learning context.*

The SoA relies on the following formal mechanisms for assessment:

- EX-CHANGE (new for F17 – an all-school end of semester discussion with external guests)
- Fourth Year Design Awards Program / John Knox Shear Commencement Award

Undergrad Student Advisory Council (SAC) & Graduate Student Advisory Council (GSAC)

Faculty Course Evaluations (FCE's)

Online Faculty and Student Surveys

Alumni Critics/Visiting Critics

Employer visits

Presidential Advisory Board

Recent changes that have resulted from these assessment processes include: creating Exploring Pittsburgh, Generative Modeling, and Fundamentals of Computational Design as CFA interdisciplinary courses (62-xxx), pushing Building Physics from 1st year spring to 2nd year spring, adding Case Studies in Architecture and Cities, parsing 1st year Studio, Analog Media and FreeHand Drawing into distinct courses and creating the co-requisite structure for 3rd year spring Studio, Ethics & Practice and Real Estate Design & Development.

*A description, if applicable, of institutional requirements for self-assessment.*

The SoA, along with all academic units at CMU, is currently engaged in preparation for the upcoming 2018 Middle States Accreditation Self-Study. Curricula and required courses for each academic program offered by the SoA are documented and reviewed for specific, measurable, and learner-centered learning outcomes.

## APR – SECTION 2 – PROGRESS SINCE THE PREVIOUS VISIT

### 2. Conditions Not Met

#### 1.2.1 Human Resources & Human Resource Development

*2012 Team Assessment: The team notes that some positive steps have been made with the hiring of several new tenure-track faculty, planned hires for two more in the coming year, and an increased focus on design quality by the new head. However, other issues noted by the 2005 team remain. Chief among these is the heavy reliance on adjunct faculty, the narrow understanding of adjunct faculty as almost exclusively professionals in local employment, severely limited mechanisms to support and evaluate junior faculty, and the ongoing uncertainty around pedagogy and design expectations in the upper years of the curriculum. In addition, a new issue is emerging, which is the succession plan for the retirement of senior research faculty in the near future, and how these high-level programs will continue to engage with the professional program. There is uncertainty about both the composition of existing faculty search committees, and about the strategic process to address future faculty hires.*

We have steadily increased our hiring of full-time faculty, both tenure track teaching track and visiting. In addition to the George N. Pauly Visiting Fellowship, we have begun offering the Ann Kalla Professorship in Architecture; both of these awards attract dynamic emerging practitioners and studio educators who, during their year in the school, teach design studios and research-by-design seminars. Their wide-ranging, global practice and teaching experience complements the experience of locally practicing professionals. Additionally, we have created a new faculty category, the full-time studio professor, to redress the problem of aesthetics and design leadership in studio, and to raise the level of critical inquiry and rigor in the studio. As a result of all of the above changes, we have dramatically changed the full time : adjunct ratio. In addition, we have adjuncts with practices and/or experience in Switzerland and Barcelona.

The full-time-to-adjunct faculty ratio in studio is:

*AY 2012 – 2013: 16 full-time / 36 adjunct*

*AY 2017 – 2018: 27 full-time / 31 adjunct*

AY 2012 – 2013 full-time faculty hires:

*Joshua Bard, Assistant Professor (tenure track)*

*Dana Cupkova, Assistant Professor (tenure track)*

*Gerard Damiani, Associate Professor (tenure track)*

*Mary-Lou Arscott, Studio Professor*

*Hal H. Hayes, Studio Professor*

*Liss Werner, George N. Pauly, Jr. Visiting Professor*

AY 2013 – 2014 full-time faculty hires:

*Erica Cochran, Special Faculty (research)*

*Frank Melendez, George N. Pauly, Jr. Visiting Professor*

AY 2014 – 2015 full-time faculty hires:

*Eddy Man Kim, George N. Pauly, Jr. Visiting Professor (visiting)*

*Greg Spaw, Ann Kalla Professor in Architecture (visiting)*

AY 2015 – 2016 full-time faculty hires:

*Eddy Man Kim, Assistant Teaching Professor (teaching track)*

*Nina Baird, Assistant Teaching Professor (teaching track)*

*Jonathan Kline, Associate Studio Professor (special faculty)*

*Mauricio Bertet (S16), George N. Pauly Visiting Professor*

*Christina Ciardullo, Ann Kalla Professorship in Architecture (visiting)*

*Lisa (Spike) Wolff, Special Faculty, Lecture Series Curator & Pre-College Director*

AY 2016 – 2017 full-time faculty hires:

- Daniel Cardoso Llach, Assistant Professor in Computational Design (tenure track)*
- Stefan Gruber, Assistant Professor in Urban Design (tenure track)*
- Erica Cochran, Assistant Professor in Sustainable Design (tenure track)*
- Daragh Byrne, Assistant Teaching Professor (teaching track)*
- Omer Karaguzel, Assistant Teaching Professor (tenure track)*
- Marco Poletto (F16), George N. Pauly Visiting Professor (visiting)*
- Nida Rehman, Ann Kalla Professorship in Architecture (visiting)*

**Succession:** We have been actively strengthening the connections between research and design in the school, through both curriculum and human resources. To extend and deepen the school's legacy in sustainable design, we have appointed Erica Cochran as Assistant Professor on the tenure track after her three-year year Special Faculty (Research) appointment; she both works closely with senior faculty in this area and pursues a range of research with her colleagues in the Center for Building Performance and Diagnostics. She was extremely successful in raising external research funds with her position at the Consortium for Building Energy Innovation (CBEI) at the Philadelphia Navy Yards.

The faculty search in 2015-16 sought both a successor to our senior computational design professor and, for the first time in the SoA history, a tenure track faculty member in urban design. We were successful in hiring candidates to these positions, but due to prior commitments, they did not join the faculty until F16. To ensure robust engagement between the professional and research programs, our current faculty search stipulates that successful candidates will have first professional degrees in architecture, perform scholarly research, and teach undergraduate design studios. We look forward to the ever more meaningful connections among research, teaching and practice that will emerge from this faculty succession.

With respect to developing a head succession plan; the current head has been creating new roles in the school to provide leadership opportunities – associate head, thesis coordinator, graduate track chairs for new faculty members, and school committee chairs. The head works closely with each of these faculty members providing insights to the administrative structure within the school, the college and university. Graphically, the hiring and succession are represented by this diagram  
(Full size PDF: <https://cmu.box.com/s/oyqv2pyfo9zt8gk3pa2k03sloan7irb1>)



**Mentoring:** CFA and SoA have undertaken separate, but associated, revisions of the Faculty Appointment and Tenure Handbook (<https://cmu.box.com/s/t6c0ihdf3bpfis2x6bsvahbkxawf76t3>). The new Handbook contains a revised School of Architecture addendum, that was approved in September 2014, providing greater clarity about the school's criteria for reappointment and tenure; about faculty mentoring; and about a new procedure known as, "casebook review", that gives junior faculty the opportunity to receive formal feedback from the School Review Committee (SRC) on their reappointment materials early in the reappointment process. To date, Professors Damiani, Bard and Cardoso have taken advantage of the new casebook review process. Prof. Damiani achieved tenure (S17), while Profs Bard and Cardoso will be reviewed in F17 and F18 respectively.

2. *Conditions Not Met*  
A.07. *Use of Precedents*

The major response to this unmet SPC was the creation of a new required second year course, Case Studies in Architecture and Cities. This course is taught by our new tenure track urban design faculty member - Stefan Gruber. In addition, the first year fall studio has steadily devoted greater and greater time to the analysis and use of precedents in architecture.

3. *Causes of Concern*

A. *The tradition of autonomy in both the school and the college is a double-edged sword. While it has allowed the school to create its own identity, it has promoted a lack of academic engagement with other CFA programs that is negative, and a culture of tentative connections between faculty from different areas within the school.*

We are a school in the College of Fine Arts as an administrative structure since the founding days of the College. As such, we are not a college of architecture with associated disciplines. We are not at liberty to leave the college and create a different engagement.

That being said, we are positioning the School of Architecture (SoA) to make clear its uniqueness amongst schools of architecture globally, by virtue of our closely aligned position within a powerful research university possessing a worldwide reputation for operating at the intersection of the arts and technology. Members of our school are participating in the current University strategic planning process with three focus areas: Transformative Teaching and Learning; Transformative Research, Creativity, Innovation and Entrepreneurship; and the Transformative CMU Experience. We want to be the "go-to" architecture school in North America known for interdisciplinarity, art, science, technology and an entrepreneurial ethic.

The SoA has long been known for its multidisciplinary approach to architecture – sustainability, urbanism, computation, engineering and practice. With the creation of Integrative Design Art & Technology (IDeATe) and with the SoA as a founding member of this network, we are taking advantage of the opportunity to formalize our focus on the concept of interdisciplinary research, practice and teaching. One outcome of this opportunity has been the creation of IDeATe courses co-taught by our faculty with faculty from other departments and colleges. Topics include media, interaction design, physical computing, human-machine virtuosity, and responsive environments. The Master of Tangible Interaction Design (MTID) degree includes all five schools of the College of Fine Arts to achieve a higher level of structured, interdisciplinary graduate education. Beyond the schools of CFA, the College of Engineering (CIT) and the School of Computer Science (SCS) are major participants in this program, making this a truly university-wide endeavor. While MTID is a graduate program, B.Arch students in IDeATe are eligible to take classes in the MTID program.

3. *Causes of Concern*

B. *There is a need to address emerging issues in contemporary architecture, such as global engagement, new practice models, and interdisciplinary study.*

Design thinking is a multidisciplinary activity but even more fundamentally it relates disciplines in an

integrated process of acquiring and testing knowledge. The integration of research with policy and practice creates a complete cycle of problem identification, data collection and analysis, theoretical and practical solution strategies, testing and evaluation, and transfer of innovations. CMU is famous for its pragmatic, multidisciplinary problem solving at the intersection of art, engineering, management and technology. CMU is a leader in design thinking from the scale of individual buildings to the scale of the city.

Social science provides knowledge on the behavior of urban dwellers and organizations in response to government incentives, regulations, innovations, service provisions, and other actions intended to improve the public good. CMU is a leader in social science research, especially in estimating causal effects from the non-experimental data typically available in urban setting. CMU is advancing the state of the art on social computing, crowdsourcing, and participatory sensing to gather and share information for a variety of domains.

Given these definitions, the B.Arch program exposes students to these concepts, not just in theory, but also as practice-based aspects of the curriculum. With regard to courses required of all BArch students, from the Case Studies course to the studios situated in Pittsburgh neighborhoods (2nd and 3rd year), our students are studying real places and meeting neighbors. They acquire and test knowledge in the real world. The 3rd year spring semester is an amazing success story in this regard. This studio, entitled, “Advanced Construction Studio” fulfills the requirements of the NAAB Realm C. But beyond “meeting” the requirement, we have implemented a whole new pedagogy to embrace critical practice. The studio project for spring 2018 is the design of Environmental Charter School on sites in four different Pittsburgh neighborhoods. To support this studio, the faculty of Ethics & Practice (E&P) and Real Estate Design & Development (REDD) have agreed to use the sites, the program and the intentions of the studio as the subject of each of their classes. Anecdotal evidence would suggest that it is working extremely well. At a recent Student Advisory Council meeting, the 3rd year students reported that this was the most well organized and compelling semester that they had experienced.

In the option studio years, students have the opportunity to dig even deeper in these critical practice issues by participating in the Urban Design/ Build Studio experience or the Urban Lab or studios with sustainable design focus.

With respect to entrepreneurship, the new 4th and 5th year option studio structure encourages students to explore multiple practice modes, from big building practice, to theater design practice to innovative sustainable design practice to emerging media/physical computing/responsive environment design practice. Upon graduation, some students enter traditional practice, while others start their own media companies, while still others work for nonprofits.

We continue to expand study abroad opportunities for our students. From University programs in CH and SG to sponsored programs throughout the EU and Asia to our new Global Studio Fund, our goal is to have every student, regardless of financial need, experience a foreign culture at least once during the B.Arch program.

### *3. Causes of Concern*

*C. Faculty appointment and promotion mechanisms need significant improvement: Despite much conversation, clear expectations for faculty success are not evident. That difficulty is compounded by the fact that faculty mentoring is nonexistent. Instead of a culture where all faculty have a stake in the anticipated success of junior faculty colleagues, nearly the opposite occurs: there is a process by which those faculty find their own “bottom up” path to academic success.*

With respect to faculty development and mentoring, the College of Fine Arts and the School of Architecture have undertaken separate, but associated, revisions of the Faculty Appointment and Tenure Handbook. The Handbook contains a new School of Architecture addendum, that was approved in September 2014, providing greater clarity about the school’s criteria for reappointment and tenure; about faculty mentoring; and about a new procedure known as, “casebook review”, which gives junior faculty the



opportunity to receive formal feedback from the School Review Committee (SRC) on their reappointment materials early in the reappointment process. To date, Professors Damiani, Bard and Cardoso have taken advantage of the new casebook review process. Prof. Damiani achieved tenure (S17), while Profs Bard and Cardoso will be reviewed in F17 and F18 respectively.

With respect to developing a faculty succession plan, we have been actively strengthening the connections between research and design in the school, through both curriculum and human resources. To extend and deepen the school's legacy in sustainable design, we have appointed Erica Cochran as Assistant Professor on the tenure track after her three-year year Special Faculty (Research) appointment; she both works closely with senior faculty in this area and pursues a range of research with her colleagues in the Center for Building Performance and Diagnostics. She was extremely successful in raising external research funds with her position at the Consortium for Building Energy Innovation (CBEI) at the Philadelphia Navy Yards. Daniel Cardoso Llach has been hired to the tenure track to succeed Ramesh Krishnamurti and Stefan has been hired to the tenure track in urban design (first tenure track appointment in this domain in the history of the SoA) to succeed Donal Carter, Executive Director of the Remaking Cities Institute.

*3. Causes of Concern*

*D. There is a continuing over-reliance on adjunct faculty, and especially of a single type (i.e., local practitioners). Individually, these adjuncts bring commitment and talent to the program. But despite their numbers, the team finds that they do not have the same voice as regular faculty on significant issues, especially for the strategic direction and governance of the school.*

Please refer to:

*2. Conditions Not Met I.2.1 Human Resources & Human Resource Development above.*

*3. Causes of Concern*

*E. While multiple methods of communication exist within the school, both individual faculty members and different interest groups within the faculty have not yet found the means to effect a meaningful conversation that can enhance the professional program.*

All faculty are now co-located on floors three and four of the MMCH Building. Beyond the serendipitous meetings around the coffee machines, restrooms and hallways on these two floors, we have created a series of structured events during the semester to encourage dialogue.

Thematic meetings are held on teaching practice and research in the areas of sustainability, computation and design. We extend our "Back 2 Front" discussions this year, by timing them in advance of each guest lecturer in our fall and spring lecture series. New for 2017 is EX-CHANGE WITH AARON BETSKY AND TREY TRAHAN | A Discussion Sparked by the Work of Our Studios for all faculty and students.

The creation of STEM- and STUDIO- based committees, while not accepted by all, was an attempt to encourage greater dialogue between those committed to studio education independently of those committed to scientific research in building science and computation. Given the generational differences and educational/experience backgrounds between these two groups, it has encouraged newer faculty to speak up more often.

*3. Causes of Concern*

*F. The new pedagogical models for Comprehensive Studio and the History and Theory stream need to be carefully and continually examined; criteria are spread across several courses and semesters.*

We were doing Realm C: Integrated Architectural Solutions before Realm C existed. Realm C is currently being fulfilled by the sequence of Materials & Assembly, Structures/Statics, Enviro I & II, Advanced Construction Studio, Ethics & Practice and Real Estate Design & Development.

The History & Theory stream is continually examined and adjusted to be sure it is effective, meets NAAB accreditation standards for all students, yet allows some variety and specific expertise to be developed by

individual students. In Fall 2012 we strengthened the History sequence by expanding the required Historical Survey from one semester, to two semesters. We now offer a "Survey I (48-240) that covers from Ancient times to approximately 1900, taught in the spring semester of freshman year. That is followed by a required course, Modern Architecture & Theory (48-241), for all students in the fall semester of their second year. Every student must then pick one more history "selective".

The results have been positive: we find that students have a better understanding of history, how the past relates to the present, and are able to bring ideas and examples from history into their design and research processes more often and more easily. Their breadth of knowledge is also more global, as both courses deal extensively with different countries, climates, religions, regions, etc., modern architecture offering a very different set of examples and ideas of globalization than the older examples.

The only "downside" has been that since we still only require three history courses, we have half the population of students selecting their third history.

Our current curriculum has just two architecture elective slots, so as a result, students have a very hard time minoring in history while keeping to the 450 unit minimum for graduation, something that was much more common before 2012.

### 3. Causes of Concern

*G. Given the school's aspirations to be a "top five" school in the Design Intelligence rankings, a question must be asked: are students being underserved in present and future employment circumstances by awarding a B. Arch. degree for 486 units, when other programs, considered to be peers by Carnegie Mellon, are awarding M. Arch. degrees for 504 units?*

We have adjusted the minimum B.Arch curriculum to the minimum NAAB requirement of 450 units while still respecting the requirement of 135 units of general studies. We have the Accelerated Master's Program (AMP) program to allow student to complete a specialized Master's degree in one semester less than the minimum by double counting up to 48 units in the 5th year. For example, one could graduate with a B.Arch + a Master of Science in Sustainable Design (MSSD) in just six academic years (12 semesters).

### 3. Causes of Concern

*H. Regarding facilities: While the MMX addition is not anticipated to be built in the near term, the possibility to enhance the entire CFA, both academically and culturally, with this future project should remain a priority.*

We continue to perform studio renovations and the College of Fine Arts has been promised space in the Posner Building when the Tepper Business School moves to its new building north of Forbes Ave in F18. The University has hired a programming consultant (GBBN-Edge) to work with the schools in CFA starting September 2017 to plan the "backfill" for the Posner Building. The SoA will be an active participant in this process.

The SoA Head is chair of the Dean's MMX committee and that innovative facility remains a priority for College and the School.

### 3. Causes of Concern

*I. Despite the substantial recent improvements, there are important facilities concerns in the short term that need to be addressed. These include continual monitoring of safety and overcrowding in the shop, increasing utilization of the digital fabrication lab, and improvements to studio spaces for pinups, group projects, and larger project assembly areas.*

The SoA has hired a new SHOP director, Jon Holmes, and a new dFAB Manager, Terry Hritz. We have part time staff to man these facilities during evening and weekend hours per University requirements. In addition, student monitors are fully trained on all equipment and complete required EH&S safety training related to shop/lab employment assist during hours of operation.

Directors participate in campus-wide Shop Safety and Safety in the Arts Committees which meet periodically and collaborate to resolve issues of policy and compliance. The University's Department of Environmental Health & Safety conducts regular shop inspections and actively tracks compliance with recommended changes. We provide dFAB training to all 2nd year students in studios and we began offering (Summer 2017) digital skills training workshops to incoming graduate students prior to the start of

their entering semester.

With respect to overcrowding in the SHOP, we now use signup sheets during periods of high demand to distribute shop use across available hours, and have formalized limits on the number of students the shop can accommodate at once. We also plan to install electrical and dust collection upgrades in the SHOP in summer 2018. These improvements will improve environmental quality and facilitate a general reorganization to make better use of the space. The creation of the shops at Project Re\_ at Construction Junction has taken a huge load off both the SHOP and dFAB.

*Further, if the Conditions have changed since the previous visit, the APR must include a brief description of changes made to the program as a result of changes in the Conditions.*

In general, the change in conditions did not result in changes to the B.Arch curriculum.

By removing absence of instructions and the phrase “The APR must include...”, the SoA had much greater flexibility to respond to each condition within its own context and the Carnegie Mellon context.

Having participated on a visiting team in 2017, the Head was able to directly observe the benefits of preparation by online review of documents, so that the team's work on site focused on student learning and progress since the previous visit.

The SoA is in string support of the five new perspectives.

In general the shifting of required materials between the APR and online supplemental materials made the APR leaner and more focused on the program itself. It certainly made the creation of the APR less labor intensive.

The SoA has had just one NAAB-accredited degree and was granted candidacy in fall 2017 for a new M.Arch NAAB-accredited degree.

The section, II.4.7 Student Financial Information, is not included in the 2014 Conditions template but has been added to the SoA APR with the December 2017 revision.

The creation of Realm C codified the SoA approach to achieving the "Comprehensive Studio" in the past and as such, the SoA is strongly in support of this revision.

## APR – SECTION 3 – COMPLIANCE WITH THE CONDITIONS FOR ACCREDITATION

### PART ONE (I): RESOURCES

#### I.2.1 Human Resources & Human Resource Development

*The APR must include the following: A resume, using the required template, for each full-time member of the instructional faculty who teaches in the professional degree program.*

##### Faculty Resumes:

Full Time B.Arch Resumes in Box (<https://cmu.box.com/s/b0ztueeg56g1o2vltle6irydogqf0i0o>)

*A matrix for each of the two academic years prior to the preparation of the APR, that identifies each faculty member, including adjuncts, the courses he/she was assigned during that time and the specific credentials, experience, and research that supports these assignments. In the case of adjuncts or visiting professors, only those individuals who taught in the two academic years prior to the visit must be identified. (The required template is available on the NAAB website). Also, the matrix must be updated for the current academic year showing the semester during which the visit takes place. This supplemental matrix should be available to the team 30 days in advance of the visit and also placed in the team room.*

##### Faculty Experience Matrix for the Last Two Years in B.Arch and Post-Professional Grad Programs:

Faculty Experience Matrix in Box (<https://cmu.box.com/s/j6n82ua50mwqcibb00dq4mzzmnjzotp0>)

*A description of the manner in which faculty members remain current in their knowledge of the changing demands of the discipline, practice and licensure.*

Faculty members are encouraged to present their work in global conference venues, to attend local and regional continuing education workshops, to participate in juries at benchmark institutions and to pursue research and/or endowment funding to support their creative activities. Funding is available from their GM accounts (below), the Gruger Faculty Discretionary Fund, the LiCeaga Fund, the Ferguson-Jacobs Prize and the College Frontiers of Research Fund. At the university level, the Berkman and the Wimmer Funds are available for full time faculty.

*A description of the resources (including financial) available to faculty and the extent to which faculty teaching in the program are able to take advantage of these resources.*

On an annual basis, an allocation is put into each faculty member's GM account based on the number of units they teach and their rank. These funds can be used for teaching expenses, travel, conference registration and/or equipment. The process does not involve applying to the Head. Receipts for the expenses are submitted to the Business Manager and then reimbursed.

*A list of past and projected faculty research (funded or otherwise), scholarship, creative activities by full-time instructional faculty since the previous visit.*

##### Faculty Funded Research | 2015 - 2017:

2015 Research Total:	\$2,121,478
2016 Research Total:	\$1,372,670
<u>2017 Research Total to Date:</u>	<u>\$913,383</u>
2015-17 Research Grand Total to Date:	\$4,407,531

Faculty Funded Research Matrix in Box (<https://cmu.box.com/s/rgic12xcfzdsjhfa1b60g6t41s7x7dy>)

*A description of student support services, including academic and personal advising, career guidance, and internship placement where applicable.*

A number of student support services are available to SoA students; students receive academic and personal advising in the School from a full-time staff academic advisor, a special faculty academic advisor, and assigned mentors through both the Faculty Mentor and Peer Mentor programs. Additional academic resources are available through Academic Development, the Carnegie Mellon Advising Resource Center, the Intercultural Communication Center, and the Global Communication Center. Personal advising is also available from the Office of International Education through assigned Foreign Scholar Advisors for international students. Personal support resources including Counseling and Psychological Services (CAPS) and University Health Services are available to students. Every student at CMU is also assigned a Housefellow through the Office of Student Life to serve as a liaison between their academic and personal/social needs.

Students are encouraged to look for internship and employment opportunities that can make use of their skills already after the first year. Alexis McCune Secosky, the SoA Architect Licensing Advisor is responsible for helping students understand and then engage in the *Architectural Experience Program* (AXP), as well as the steps to licensure. She covers those as a guest in 1st year seminar. In 2017, the SoA appointed Kristen Frambes as Alumni Relations and Career Adviser to connect our alumni with job opportunities to our students seeking employment and continually solicits the attention of students through career fairs, a newsletter with job opportunities called *Opportunity Knocks*, as well as forging close alliances and connections with the CMU Career Center, where a specialist also works with architecture students.

We have planned our first ever panel discussion, *MY ARCHITECTURE | A discussion on architectural careers in the creative arts* as part of the fall SoA lecture series. It features SoA alumnus Jonathan Tolbert, the director of the AIA Center for Emerging Professionals (CEP) and four young architects that have pursued different careers with their architecture degree.

Although we do not offer a guaranteed job placement program, the SoA has created a series of arrangements with prestigious firms such as SOM, KPF, Payette and others to take one or more current CMU students for summer internships, which often translate into employment after graduation. In recent years nearly all grads have been able to find employment readily in the profession of area of their choice.

*The name of the Architect Licensing Advisor (formerly the IDP Coordinator) and a summary of his/her recent activities, including professional development, in support of his/her responsibilities.*

Alexis McCune Secosky is the Architect Licensing Advisor (ALA) and is currently registered as such on the NCARB website. She keeps current by attending national and regional workshops and conferences.

## I.2.2 Physical Resources

*For programs whose pedagogy requires physical resources, the APR must include the following:*

*A general description, together with labeled 8-1/2" x 11" plans or images of the physical resources assigned to the program, including all spaces used for teaching/learning, scholarship, and public interaction.*

The School of Architecture occupies two wonderful turn-of-the-century buildings on the central part of campus. With over 50,000 square feet of space in these two buildings, (Margaret Morrison Carnegie Hall and the College of Fine Arts), the School is able to provide dedicated studio space for every full-time student.

**Studios:** As the foundation to the pedagogy of the first professional degree programs, the studios are of ultimate importance. There is one large studio in CFA, CFA 200, and one large studio in Margaret

Morrison Carnegie Hall, MMCH 312. During the summer of 2017, the SoA renovated the studios in both buildings and created modified workstations. The 1st and 2nd year students were moved to CFA 200 and the 3rd, 4th, and 5th year B.Arch students to MMCH 312. This allows upper level B.Arch students to be co-located with our studio-based graduate programs - M.Arch, Master of Advanced Architectural Design, Master of Urban Design.

### **Specialized Facilities:**

**Digital Fabrication (dFAB) Lab** (MMCH C): The Design Fabrication Lab (dFAB) provides students and faculty state of the art resources to model, prototype and construct. Architecture is fundamentally physical, dFAB offers students and faculty advanced digitally driven design, prototyping and manufacturing equipment to span the divide between virtual simulation and physical design investigation. The space consists of both traditional CNC equipment as well as large scale industrial robots which facilitate building scale research and instruction. Students and faculty from the SoA use the lab—open 40 hours per week—throughout the design process and at multiple scales. The lab is located in the basement of Margaret Morrison Carnegie Hall (MMCH) and comprises 4000 square feet, including 1000 square feet of dedicated robotic fabrication space.

Robotic lab equipment includes:

*ABB IRB 4400 7-axis industrial robotic cell, including external rotary axis table (45kg payload rating)*

*ABB IRB 6640 8-axis industrial robotic cell, including 6-meter linear rail axis and tool axis (180kg payload rating)*

Automated tooling includes:

*tool change milling spindle, pneumatic gripper, sensor probe, hot wire cutter, and incremental metal former*

Other equipment includes:

*4-axis CNC router (48" x 96" x 11" cutting volume), includes oscillating tangential knife, 24" x 36", 75W laser cutters (2), vacuum forming machine (22" x 22" x 16" forming volume), 60" x 96" vacuum laminator, fused deposition soluble support 3D printer, plaster powder color 3D printer*

**Computational Design (CoDe) Lab:** (MMCH 403): CoDe Lab is a proto-makerspace with a curriculum based on post-disciplinary education. The space is designed to facilitate collaboration between architects, computer scientists, artists and engineers at the frontier of design and technology. The lab is currently under new directorship and assessing next steps in curriculum design as well as actively seeking to update internal computational, fabrication and prototyping resources. The facility is home to students in the Master of Tangible Interaction Design (MTID) and Computational Design programs but is open to interested students at all levels, from any background.

The lab is divided into two, 300 SF spaces: a classroom, and fabrication/office space for ~20 computational design students.

Equipment includes (\*\*\*) updated 20170725):

*Virtual reality rig, Epilog 24" x 18" laser cutter (beyond service warranty), Dimension SST FDM 3D printer (beyond service warranty), component storage, electronics workbench with soldering stations, drill press, bandsaw, various power & hand tools*

**Robert L. Preger Intelligent Workplace (IW)** (MMCH 415): Comprising 6700 square feet, this living and lived-in office/laboratory sits atop Margaret Morrison Carnegie Hall to provide hands-on experience with

the performance of advanced integrated building technologies including acoustics, lighting and materials. It also affords interaction with leading researchers and professionals in architecture, engineering, manufacturing, government and the nonprofit sector who visit to participate in research and demonstration projects. Research undertaken in the IW aims to improve organizational flexibility; technological adaptability; energy and environmental effectiveness; and the health, productivity and motivation of white-collar workers. The IW is home to the Center for Building Performance and Diagnostics but is open to all interested students.

Selected components include:

*radiant heating and cooling through water-flow mullions and ceiling panels, energy recovery ventilation, modular components (eg, structure, façade, access floor tiles, power, voice and data, interior systems), windows that maximize daylight, ventilation and heat rejection, environmental control and feedback via iOS apps, extensive insulation, including stress-skinned insulated metal panels, DfD (design for disassembly)*

**The Shop (CFA A):** The woodshop provides a setting for each member of the School of Architecture to explore the process of designing and creating objects by hand. Every first-year student receives training in the use of basic shop equipment, and applies these skills in the completion of projects during the fall and spring semesters. Many students continue to develop their wood- and metal- working abilities throughout their courses of study. The shop is nearly 3,800 square feet in size with a large machine and bench room, tool and material storage areas, a project storage area, offices, a library, and an adjacent pin-up area for design review.

Plans are currently being developed to install a central dust collection system with the aim of improving shop air quality, reducing noise levels, and freeing up space to improve circulation and provide open areas for the construction of larger structures. Anticipated construction start is summer 2018.

Main shop area equipment includes:

*a 20" surface planer, 12" jointer, two SawStop table saws, vertical panel saw, radial arm saw, five band saws, spindle sander, vertical and horizontal belt sanders, two 12" disc sanders, slot and hollow chisel mortisers, wood lathe, vertical mill, router table, four drill presses, 24" drum sander, scroll saw, vacuum press and a large collection of handheld tools. A separate metalworking area is furnished with a vertical mill, machine lathe, horizontal bandsaw, drill press, 36" shear, slip roll, and magnetic and finger brakes.*

**Remaking Cities Institute (RCI):** An urban design research center based in the School of Architecture, the RCI aims to promote an improved quality of life in cities and towns through academic, applied and action research into place-making and community redevelopment. The RCI expands the regional and global impact of the School of Architecture's urban design studios and Master of Urban Design (MUD) program by fostering multi-sector collaboration between faculty, researchers, professionals and community organizations.

With the national AIA, the RCI co-hosted in 2013 the Remaking Cities Congress, a working meeting of 300 invited urbanists from around the world. The focus of the Congress was on post-industrial cities in the US and Europe. Subsequently, Routledge Press published a book edited by Donald Carter, (RCI Director) documenting the case studies of the ten cities presented at the Congress.

Recent RCI research projects include: 3D Visualization of Buildings, the Public Realm, and Infrastructure from Simulation Data for Development Project Analysis; Highway Corridor Transformation Research Study (PennDOT); LED Neighborhood Streetlight Replacement Study (City of Pittsburgh); and Envisioning Johnstown: Next Steps (Johnstown, PA).

The RCI has ongoing research and academic exchanges with Politecnico di Torino (Torino, IT) and La Salle University (Barcelona, ES), particularly related to regeneration of post-industrial cities and the creation of Innovation Districts. Carter is a Trustee of Catedra Barcelona, a newly formed partnership of the City of Barcelona and La Salle University in which the university is the city's R&D department and the city is a test-bed.

**Project Re\_:** PROJECT RE\_ is a community workshop, job training facility, and fabrication center created by the School of Architecture's Urban Design Build Studio (UDBS) in collaboration with an apprentice training program, the Trade Institute of Pittsburgh (TIP), and a regional material repurposing center, Construction Junction (CJ). The 14,900 square foot facility provides a setting for all SoA students to collaborate with the community and partners on the creation of value added projects ranging from furniture to buildings. Production and fabrication spaces at PROJECT RE\_ include a state of the art industrial woodshop, industrial welding and metal shop, mobile digital fabrication laboratory, CNC plasma shop, stone cutting/ processing shop and a pre-fabrication assembly bay. These shop facilities are complemented by a multifunction community room, public gallery, and studio space designed to enhance community outreach, education and training. Designed and constructed by the SoA's UDBS, the facility demonstrates a cultural commitment to the merging of traditional craft with advanced digital technologies.

Equipment available at PROJECT RE\_ includes:

*Grizzly 25" planer, Dewalt 13" planer, SawStop cabinet grade table saw, Speed Cut H4 50" panel saw, Powermatic 5 HP Shaper, Powermatic 12" jointer, Jet 8" jointer, Jet 14" bandsaw, Ellis 18" 2 HP drill press, Blackfoot CNC router, JLG scissor lift, Powermatic Disc/Belt Sander, Powermatic 2 HP lathe with 50" extension, two Dewalt 12" Sliding Compound Miter saws, three Dewalt 10" contractor table saws, G7 Fabricator CNC plasma cutter, three welding booths with mig and tig welders at each station. Over 200 pneumatic, battery, and corded handheld tools complement the selected stationary equipment identified.*

*A description of any changes to the physical resources either under construction or proposed.*

We anticipate removing the wall dividing MMCH 312 from corridor MMCH 328 to improve spatial flexibility, daylight and ventilation. The variances required for this work will be negotiated during academic year 2017-18 with the City of Pittsburgh Permits, Licensing and Inspections bureau and construction completed during summer 2018.



# College of Fine Art Floor A

- Legend**  
**CFA A Departments**  
**Occupying Organization**
- 112000 - CABLE PLANT (COMP SVCS), 137 occupied sq ft
  - 210000 - FACULTY OFFICE, 2,001 occupied sq ft
  - 210100 - ARCHITECTURE, 442 occupied sq ft
  - 210500 - ARTS, 8,979 occupied sq ft
  - 530300 - FMS OPERATIONS - MAINTENANCE, 9,048 occupied sq ft
  - 630300 - FMS OPERATIONS - CUSTODIAL SERVICES, 118 occupied sq ft
  - 044800 - SHARED ROOM OCCUPANCY



A11A	Shop Service
A11B	Scott Smith
A13A	Jon Holmes
A13B	Shop Library
A17	Woodshop Storage
A21A	Storage
A23	Shop Service
A25	Shop Service
A9	Woodshop
A9A	Shop Service

# College of Fine Art Floor 2





# Margaret Morrison Carnegie Hall Floor 3

## Legend

### MMCH-3-Departments

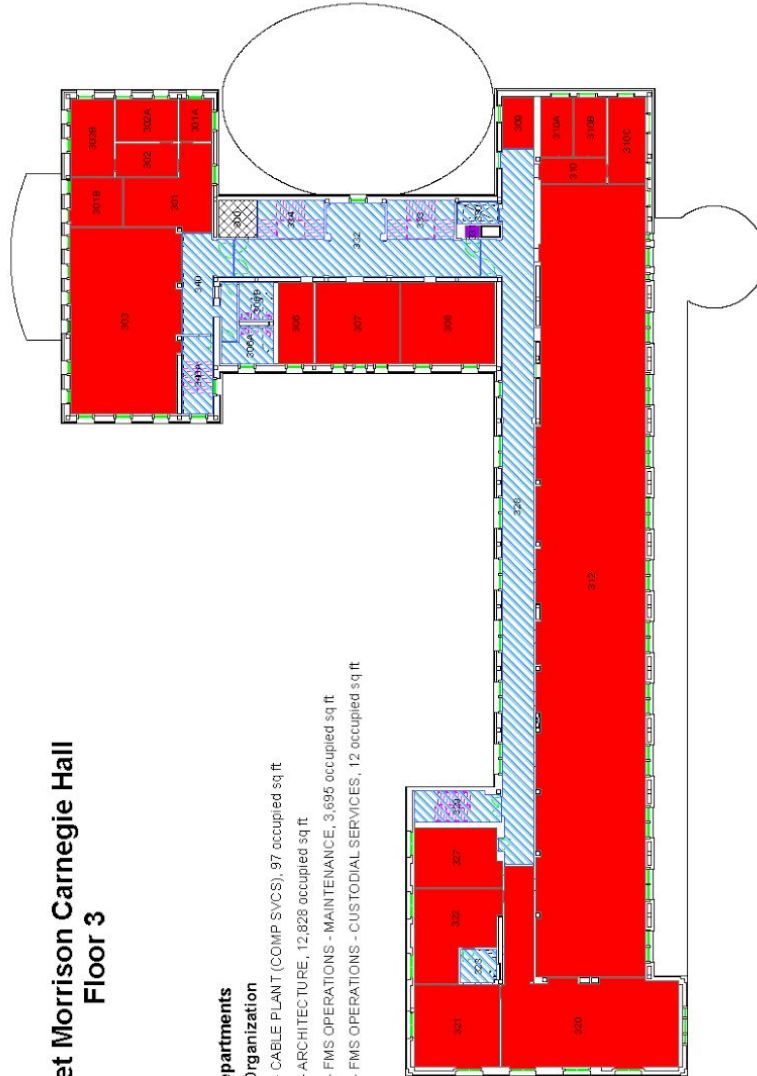
#### Occupying Organization

112500 - CABLE PLANT (COMP SVCS), 97 occupied sq ft

210100 - ARCHITECTURE, 12,828 occupied sq ft

530300 - FMS OPERATIONS - MAINTENANCE, 3,695 occupied sq ft

530320 - FMS OPERATIONS - CUSTODIAL SERVICES, 12 occupied sq ft



301	Conference Area
301A	Spike Wolf
301B	Gerard Damiani
302	History Library
302A	Kai Gutschow
302B	Diane Shaw
303	Class/Crit Room
306	Dana Hartkopf
307	Heather Workinger-Midgley
	Charles Rosenblum
	Michael Jeffers
	RCI
308	Mary-Lou Arscott
	Hal Hayes
	Daragh Byrne
	Nida Nehman
	Jonathan Kline
	Francesca Torello
	Eddy Man Kim
309	Daniell Cardoso-Llach
310	Exhibition Space
310A	Stefan Gruber
310B	Ioshua Bard

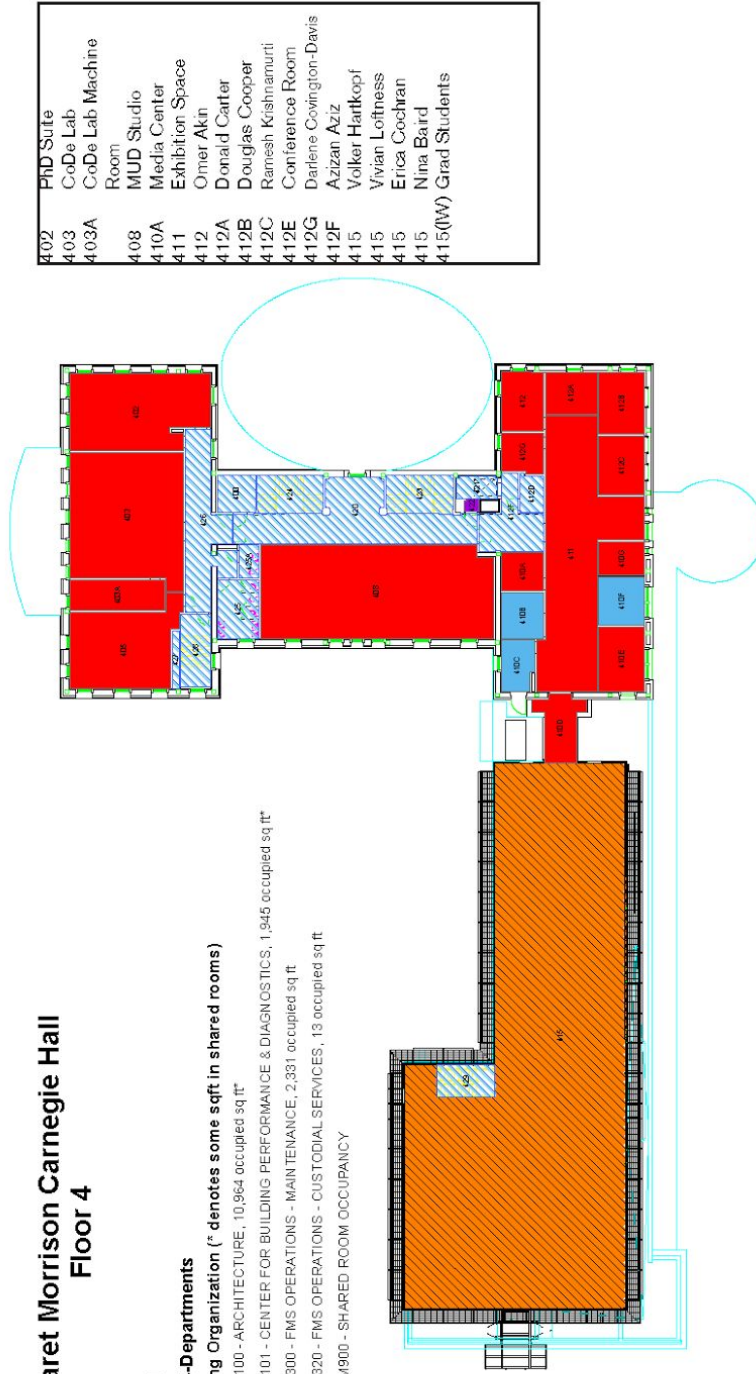
## Margaret Morrison Carnegie Hall Floor 4

### Legend

#### MMCH-4-Departments

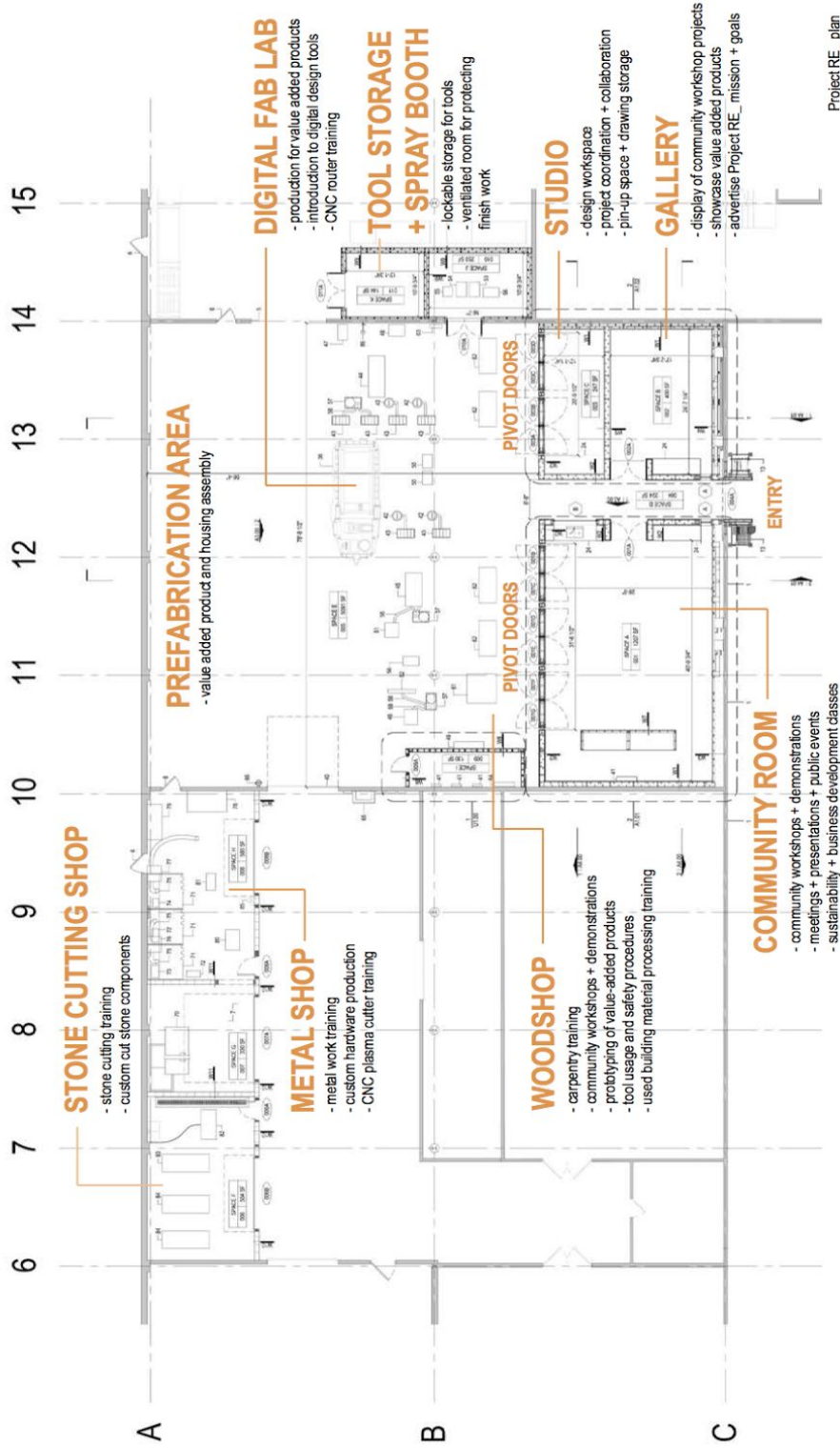
Occupying Organization (\* denotes some sqft in shared rooms)

- 210100 - ARCHITECTURE, 10,964 occupied sq ft\*
- 210101 - CENTER FOR BUILDING PERFORMANCE & DIAGNOSTICS, 1,946 occupied sq ft\*
- 530300 - FMS OPERATIONS - MAINTENANCE, 2,331 occupied sq ft
- 530320 - FMS OPERATIONS - CUSTODIAL SERVICES, 13 occupied sq ft
- OAM900 - SHARED ROOM OCCUPANCY



402	PhD Suite
403	CoDe Lab
403A	CoDe Lab Machine Room
408	MUD Studio
410A	Media Center
411	Exhibition Space
412	Omer Akn
412A	Donald Carter
412B	Douglas Cooper
412C	Ramesh Krishnamurti
412E	Conference Room
412G	Darlene Covington-Davis
412F	Azizan Aziz
415	Volker Hartkopf
415	Vivian Loftness
415	Erica Cochran
415	Nina Baird
415(W)	Grad Students





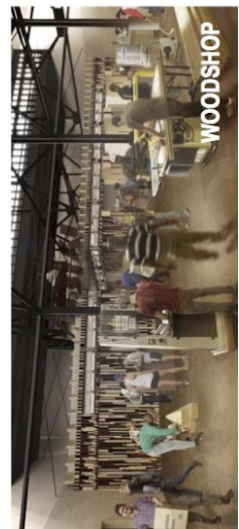
Project RE\_plan



GALLERY



COMMUNITY ROOM



WOODSHOP

*Identification of any significant problem that impacts the operation or services, with a brief explanation of plans by the program or institution to address it.*

The unique structure and culture of Carnegie Mellon is built upon the notion that the School of Architecture is a part of the College of Fine Arts and not a separate school with departments onto itself, as might be seen at other universities. The SoA lacks a “front door” as a consequence of being split in two buildings on either upper floors or deep basement floors. It is not feasible in the near future to consolidate the architecture spaces into one building with a direct ground floor entrance. The Margaret Morrison Extension (MMX) is the ideal future for the school. The dean has re-started the MMX visioning process under the SoA head's direction. The MMX is in the queue of university capital projects, but will remain visionary until adequate funding is acquired. This proposed 125,000 gsf facility, represents a monumental opportunity to address space issues for each of the schools and units. More importantly though, it is the 21st century embodiment of Hornbostel's original vision of co-locating five artistic disciplines together in one building to support interdisciplinarity. Combining the existing Margaret Morrison Carnegie Hall spaces with the MMX means that all five schools and the Frank-Ratchye STUDIO for Creative Inquiry can be located in one building – the “CFA” building of the 21st century.

Until such time that the grand vision is realized, the Dean and the Head are working with advancement to raise at least \$500K to improve the educational experience for our students through specific improvements to the facilities. This will include new workstations for each student that include 5K monitor, drawing/modeling space, power, storage and ergonomic seating and pin-up frames. In addition, all review spaces will be upgraded with better (or new) projection and flexible, adaptable, lighted pin-up solutions.

The Tepper School of Business will be vacating Posner Hall (between CFA and MMCH) to move into their new building by fall 2018. While Posner is not appropriate for studios or makerspaces, the SoA would have access to classrooms and a small lecture hall. If any of the schools of CFA vacate their CFA or MMCH spaces, the SoA is in line to take those spaces over. Having the SoA split between three buildings would be counterproductive.

*A description of how the program provides space for faculty to fulfill all four of their roles: teaching, scholarship, service, and advising.*

All tenured and tenure-track faculty have individual office space while teaching; special; research and adjunct faculty are provided shared office spaces. All full time faculty receive a high end laptop or a desktop computer (renewed every three years), standard software package (renewed every year) and an annual GM account with \$1850/ year for travel, fees, books, etc.

Adjacent to the studios are lecture and seminar spaces that accommodate both didactic and interactive learning; analog and digital workshops for making and research laboratories.

The faculty and staff all have access to the specialized facilities in the SoA - Intelligent Workplace, Shop, dFAB, CoDe, RCI & Project Re\_ by appointment with the respective directors of those facilities.

*Programs that leverage international programs, or off-campus settings such as urban centers, to teach courses where student performance criteria are being met, must provide a description of these venues in the APR and how they affect a program's on-campus physical resources.*

Our internationally recognized Urban Design Build Studio (UDBS) is co-located within MMCH 312 and Project Re\_ at Construction Junction, approximately 3 miles from the center of main campus. This 14,900 sf space has been converted from a warehouse to a custom fabricated community room, studio and gallery space, metal, stone cutting and wood shops and digital fabrication lab.

We have collaborative arrangements with La Salle University School of Architecture in Barcelona, ES and Politecnico di Torino (PoliTo) in Torino, IT. We are hosting three masters students from PoliTo through

the European Erasmus program and anticipate multiple SoA faculty to be in residence at PoliTo over the next three years with our jointly awarded Erasmus+ Mobility grant.

### I.2.3 Financial Resources

*The APR must include the following: A description of the institutional process for allocating financial resources to the professional degree program.*

Currently, the annual base allocation is a historically-based amount to which incremental increases are applied from year to year to allow for faculty & staff merit-based salary increases, as well as adjustments for the cost of University-wide benefits programs. The base allocation is not dependent upon the number of students enrolled. Requests for one-time or base allocation increases may be submitted to the central administration for consideration. Separate from the base allocation, the School also receives a percentage of the graduate tuition revenue generated from its Masters and PhD programs.

As Provost, Interim President Farnam Jahanian began developing a new hybrid allocation model for the University, which is expected to be phased in beginning in FY19. With keen anticipation, the SoA awaits the details on this new model and the schedule for its implementation, but our general understanding is that this new model will tie the college's allocation to student enrollment (FTE), units taught, and overhead (indirect cost) recovery.

*A description of the expense categories over which the program has either control or influence.*

All faculty and staff salaries and operating expenses, as well as graduate student tuition, are initiated at the School level and approved by the Dean. The School has no discretion over the offers of financial aid to our undergraduate students.

#### USES OF FUNDS: FY16

FT Faculty Salaries:	\$2,281,000	38%
Grad Expenses:	\$1,042,000	17%
Staff Salaries:	\$765,000	13%
Adjunct Salaries:	\$443,000	7%
Other:	\$1,547,000	25%
	\$6,078,000	

#### USES OF FUNDS: FY17

FT Faculty Salaries:	\$2,592,000	43%
Grad Expenses:	\$1,036,000	17%
Staff Salaries:	\$755,000	12%
Adjunct Salaries:	\$531,000	9%
Other:	\$1,246,000	21%
	\$6,160,000	

*A description of the revenue categories over which the program has control or influence.*

The Head works with CFA and University Advancement to cultivate gifts from foundations, corporations and individuals to provide additional revenue for the School, which may be unrestricted in purpose, or restricted to support specific activities through expendable or endowed funds. The School also manages a number of existing endowed funds supporting faculty salaries, scholarships and fellowships, and other activities such as a lecture series, and student prizes and travel awards.



SOURCES OF FUNDS: FY16

Allocation:	\$3,582,000	59%
Grad Income:	\$2,440,000	40%
Other:	\$56,000	1%
	\$6,078,000	

SOURCES OF FUNDS: FY17

Allocation:	\$3,803,000	63%
Grad Income:	\$2,316,000	38%
Other:	\$41,000	1%
	\$6,160,000	

*A description of the scholarship, fellowship and grant funds available for student and faculty use.*

**Students:** The admitted students in the B.Arch program receive financial aid package offers, based on family need, directly from the Central Administration. The package can include scholarships, grants, loans and work study. Recently, the University created Presidential Scholarships to attract and retain the world's best students. For the admitted students entering in fall 2017, we offered six Presidential Scholarships of \$25,000 each for five years to our top septile and matriculated four. For the past two years, the Office of Admission has met 100% of family financial need for the College of Fine Arts and Dietrich College of Humanities and Social Sciences. This had an immediate positive impact on enrollment.

**Faculty:** Faculty funding is available from individual GM accounts (below), the Gruger Faculty Discretionary Fund, the LiCeaga Fund, the Ferguson-Jacobs Prize and the College Frontiers of Research Fund. At the university level, the Berkman and the Wimmer Funds are available for full time faculty. On an annual basis, an allocation is put into each qualifying faculty member's GM account based on the number of units they teach and their rank. These funds can be used for teaching expenses, travel, conference registration and/or equipment. The process does not involve applying to the Head. Receipts for the expenses are submitted to the Business Manager and then reimbursed.

*A brief summary of the following (limited to 1 page; may be a bulleted list):  
Pending reductions or increases in enrollment and plans for addressing these changes.*

The B.Arch target established by Central for the incoming class is sixty students. The entering class in 2016 was seventy-two or 20% over target. This was due in part to the new University policy of meeting 100% of student need for CFA and Dietrich College. Working with the Office of Admissions to reach but not exceed our target, we reduced the number of admitted students by 20% and matriculated sixty-two 1st year students for the class of 2022. The budget, facilities and life of the B.Arch program work best at between 60 ~ 65 students. Admissions and SoA will continue to monitor this data and make adjustments in policy as necessary.

*In reviewing a program's physical resources, the NAAB is not offering an opinion as to whether, or certifying that, the institution's facilities comply with all applicable fire, safety, building, and health codes and regulations.*

*Pending reductions or increases in funding and plans for addressing these changes.*

As Provost, Interim President Farnam Jahanian began developing a new hybrid allocation model for the University, which is expected to be phased in beginning in FY19. With keen anticipation, the SoA awaits the details on this new model and the schedule for its implementation, but our general understanding is that this new model will tie the college's allocation to student enrollment (FTE), units taught, and overhead (indirect cost) recovery.

Given the continuing revenue model for graduate programs, the new M.Arch could have significant impact of funding for the school as the program matures.

*Changes in funding models for faculty compensation, instruction, overhead, or facilities since the last visit and plans for addressing these changes (include tables if appropriate).*

Each full time faculty is responsible for four activities per year. An activity is defined as:

*Teach a studio (12~18 units)*

*Teach a course (6~9 units)*

*Direct a Center or Lab*

*Buy-out of teaching with \$20,000 + full time benefits being charged to funded research*

*Planned or in-progress institutional development campaigns that include designations for the program (e.g., capital projects or endowments).*

Carnegie Mellon is currently working to announce a capital campaign in late 2018 or early 2019; while specific goals and objectives for the School of Architecture have not yet been finalized, there will in general be emphasis on increasing the university's endowment, with additional funding for student support; enhancing the CMU Experience, to emphasize personal development and accelerate student success; and investing in capacity to support research and creativity across the university. In 2016, the university increased support for staff and infrastructure for fundraising and alumni relations at the College of Fine Arts, including the School of Architecture.

The College of Fine Arts Advancement group works across all of CFA's schools and programs and coordinates efforts with Central CMU Advancement. The team consists of:

*Carolyn Hess Abraham, Associate Dean for Advancement, leads the team, directs the strategy and works on the cultivation and solicitation of our highest capacity individual and institutional donors.*

*Laura Herr, Director of Development, is strategy lead for individual donors, and leads our planned giving strategy.*

*Sue Tolmer, Director of Corporate and Foundation Relations, cultivates and solicits gifts from our corporate and foundation partners.*

*Alli Frymoyer, Assistant Director of Development, works with our recent alumni and Andrew Carnegie Society level donors (\$1000 going to \$2500+ per year) and coordinates our annual fund strategy.*

*Daniella Staudacher, Development Associate, provides administrative and research support to frontline fundraisers, coordinates events, and manages our gift acknowledgment process.*

### **Significant Gifts and Funding:**

The SoA has also received a number of significant gifts in support of our school. The advancement staff within the College of Fine Arts and the University assist the department head, individual faculty and students with identifying and securing funding. The Assistant Dean for Research in the college supports faculty and students in preparing and submitting proposals for research. These college staff have been tasked with assisting our incoming M.Arch students in the same way.

The SoA received the following gifts, grants and/or major research funding for equipment, facilities, centers and other projects:

*A \$2 million gift was received from the Heinz Endowments. This is one of the more significant gifts received by the SoA with \$1.5 million being dedicated to a named endowment: The David Lewis*

*Directorship of the Remaking Cities Institute. A total of \$500,000 was dedicated to funding 3 years of the UDream - (Urban Design Regional Employment Action for Minorities) program. Additional Heinz funding allowed us to stretch the program into an 8th year.*

*Gifts totaling \$403,000 were received from the Heinz Endowments to support the creation of Project Re\_ at Construction Junction in North Point Breeze approximately 3 miles from the main campus.*

*The SoA received an endowed gift of \$750,000 from the P.J.Dick Corporation to support fellowships in the AECM programs.*

*A grant of \$250,000 was received from the Enkeboll Foundation for the Arts and Architecture in support of Integrated Design and Practice as well as the purchase of a 6-axis robotic milling system with rotating materials table, controlling hardware and software (\$134,000) and the funding of student projects.*

*A special \$491,000 allocation was received from the Provost to fund the renovation of the Margaret Morrison Carnegie Hall (MMCH) C Basement for the creation of a Digital Fabrication Lab in conjunction with the hire of tenure track faculty member Jeremy Ficca.*

*An additional special allocation of \$215,000 was received from the Provost to fund additional renovations of the Margaret Morrison Carnegie Hall (MMCH) C Basement as well as the addition of an 8-axis ABB IRB 6640 robot on 7 meter track to support the research and teaching of tenure track faculty member, Josh Bard.*

*A special allocation was received from the Provost over a 3 year period to fund Assistant Professor Erica Cochran to work full time at the Navy Yard in Philadelphia to oversee the SoA's \$3.6M of the DOE funded Consortium for Building Energy Innovation (CBEI) project, then an additional University contribution to her Full Time salary as a Tenure Track faculty member over 3 years (2017-2019).*

*A gift of \$150,000 from Jim Halpern (B.Arch 1981) was received in 2017 to support the renovation of the MMCH 312 studio. The money was used to create new workstations with integral storage and pin-up space, to purchase additional computers and 4K monitors so every workstation includes computing with the SoA software image and upgrades to power and networking. This studio houses 3rd, 4th and 5th year B.Arch students, M.Arch students, MUD students and MAAD students.*

#### 1.2.4 Information Resources

*The APR must include the following:*

*A description of the institutional context for library and information resources.*

*A description of the library and information resource collections, services, staff, facilities, and equipment that includes the following:*

*A brief description of the content, extent, and formats represented in the current collection including subject areas represented.*

*A brief description of any significant problem that affects the operation or services of the libraries, visual resources collections, and other information resource facilities that support the accredited program and plans for addressing them.*

The CMU Libraries supports teaching, learning, and research activities of all faculty and students at the university. The Libraries strives to meet the university's contemporary needs and aspirations with an increasing emphasis on support for researchers and graduate programs. CMU's information resources are competitive in an environment that encourages resource sharing and plays to the University's technological strengths. The Libraries support all SoA curriculums and programs including the five-year undergraduate first-professional degree program and graduate Masters and PhD programs.

The position of Architecture Librarian and Archivist is divided between liaison responsibilities for the SoA and responsibility for the CMU Architecture Archives. The Architecture Librarian and Archivist reports to the Associate Dean of University Libraries, who leads the Research and Academic Services division. The Dean of University Libraries reports directly to the University Provost. Librarians and Archivists have faculty status at CMU under the Policy on Librarian and Archivist Appointments. Library faculty must meet

criteria for reappointment and promotion, and are required to pursue scholarly and creative activity and professional service. The current Architecture Librarian and Archivist, Martin Aurand, is appointed at the Principal Librarian level, the highest faculty rank. The Architecture Librarian and Archivist has no formal faculty status within the SoA, but is welcomed as a faculty colleague within the SoA. The current Architecture Librarian and Archivist holds a Master of Library Science degree and an M.A. in American Studies and Historic Preservation, and is a member of the Association of Architecture School Librarians (AASL) and the Art Librarians Society of North America (ARLIS/NA).

The Architecture Librarian and Archivist is responsible for:

*Reference and consultation services provided via office appointments, regularly scheduled “office hours” in the SoA, email, or phone.*

*Instruction, teaching, and classroom support activities including library orientation and information literacy sessions, teaching and learning sessions with archives and special collections, topical lectures, course-specific Web pages, and book carrels in studios.*

*Collection development and management in various media including books and e-books, periodicals and e-journals, electronic resources such as databases and other Web-based products, and drawings and other architectural records.*

*Communications and guidance regarding issues in scholarly communications including citation management, research data management, open access, research metrics, and the university’s institutional repository for scholarly output.*

*Outreach to SoA faculty, staff, and students through promotion of library resources and services, participation in school culture and project reviews, and so forth.*

When not present in the SoA, the Architecture Librarian and Archivist is based in the Arts Library, which occupies the fourth floor of Hunt Library, a central arts, humanities, social sciences, and business library within short walking distance of SoA facilities. The Sorrells Engineering and Science Library is also a short walking distance from SoA facilities. The Arts Library supports teaching, learning, and research activities of faculty and students in CMU’s College of Fine Arts including the schools of Architecture, Art, Design, Drama, and Music. The Arts Library also serves architecture and other arts constituencies across the university and within the larger community.

A curriculum-based program of library instruction supports the educational objectives of the SoA. First-year architecture students participate in the University’s C@CM (Computing at Carnegie Mellon) program, which provides instruction in computer skills, research skills, and information ethics. Instruction sessions tied to specific courses and assignments in the SoA orient students to the Libraries, teach the use of information resources and technology, and introduce research topics and methods. The Architecture Librarian and Archivist and teaching faculty are jointly responsible for this instruction throughout the curriculum. Presently, library instruction occurs most explicitly in the first-year studio and seminar, in upper-level classes that require research papers, and in thesis preparatory courses. Incoming graduate students are introduced to the research environment at CMU. Library instruction also encompasses sessions that promote teaching and learning with rare books and architectural drawings. The Libraries provides ever-expanding access to electronic information resources that are increasingly available without regard to place. At the same time, the Libraries continues to grow its print collections, and maintains a commitment to providing information resources in whatever media are necessary and appropriate. For architecture and the arts in particular, active collecting in a variety of media will continue for the foreseeable future.

CMU Libraries’ book collections surpass one million volumes. Though subject-based collection figures are difficult to compute in a central library, collections include approximately 50,000 volumes in NA and other classes related to architecture, landscape architecture, construction, and urbanism. The collection

includes an increasing number of e-books, especially reference works and titles in technical fields. Books and e-books are classified using the Library of Congress Classification system. The Libraries offers interlibrary loan and document delivery services, greatly expanding the scope of available resources on an as-needed basis. CMU affiliates have borrowing privileges at the University of Pittsburgh and the Carnegie Library of Pittsburgh.

The Libraries currently subscribes to approximately 75 active architecture-related journals and e-journals. The Libraries maintains extensive back-runs of numerous additional titles, subscribes to hundreds of titles in related fields, and provides access to thousands of additional titles via aggregated databases and other online collections. "A Core List of Periodical Titles for a First Professional Degree in Architecture," developed by the Association of Architecture School Librarians (AASL), has long been used to shape this collection. The Libraries also provides access to dozens of web-based databases that are of use for architectural research including the Avery Index to Architectural Periodicals, Art Source, Design and Applied Arts Index, JSTOR, and Compendex. Subscriptions to more specialized electronic products include the BuildingGreen Suite and MADCAD. Increasingly, such resources provide online access to full-text articles and other documents. The Arts Library also subscribes to a number of visual image databases including ARTstor. Architecture-related videos are available in the Video Collection.

The CMU Architecture Archives is a special collection of architectural drawings and other records documenting the architects and architecture of Pittsburgh and its region. The Archives serves as a resource for the SoA, CMU, and the community at large. It encourages class visits and student projects, and sponsors and participates in exhibits, publications, and special projects.

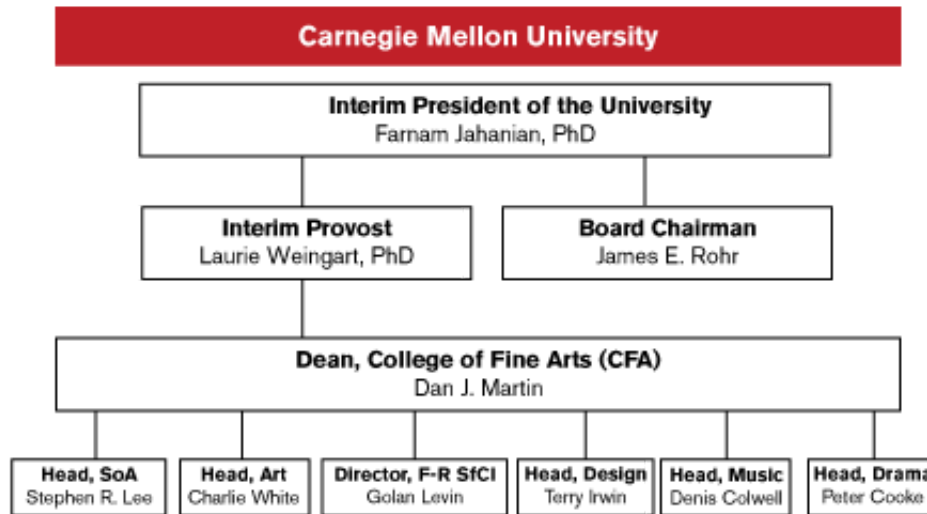
Funding for library operations takes place within a centralized University Libraries context. CMU has increased funding for library materials annually by approximately 5% for the last twenty years. This sustained record of funding increases demonstrates institutional commitment and has had a significant impact on the library and its users. The Architecture Librarian and Archivist is responsible for expending funds allocated for architectural resources, which surpass \$60,000 annually. Though subject to a number of special circumstances that may affect annual totals, this spending level is sustainable. The Caste Architecture Resources Endowment Fund, valued at approximately \$40,000, provides additional funding for library materials. Endowment funds dedicated to the Architecture Archives are valued at approximately \$175,000. Substantial funding expended for other library collections also benefits the SoA as architectural education becomes increasingly interdisciplinary.

## I.2.5 Administrative Structure & Governance

*The APR must include the following:*

*A description of the administrative structure for the program, the academic unit within which it is located, and the institution. A chart or graphic that illustrates the description.*

### University Organization Chart:



The University consists of seven colleges and schools: the College of Fine Arts (which includes the School of Architecture), the Carnegie Institute of Technology (engineering), the Dietrich College of Humanities and Social Sciences, the Mellon College of Science, the Tepper School of Business, the School of Computer Science, and the H. John Heinz III College (Public Policy & Information Systems).

The CFA includes the five schools - Architecture, Art, Design, Drama & Music - and the Frank-Ratchye Studio for Creative Inquiry (FRSfCI),

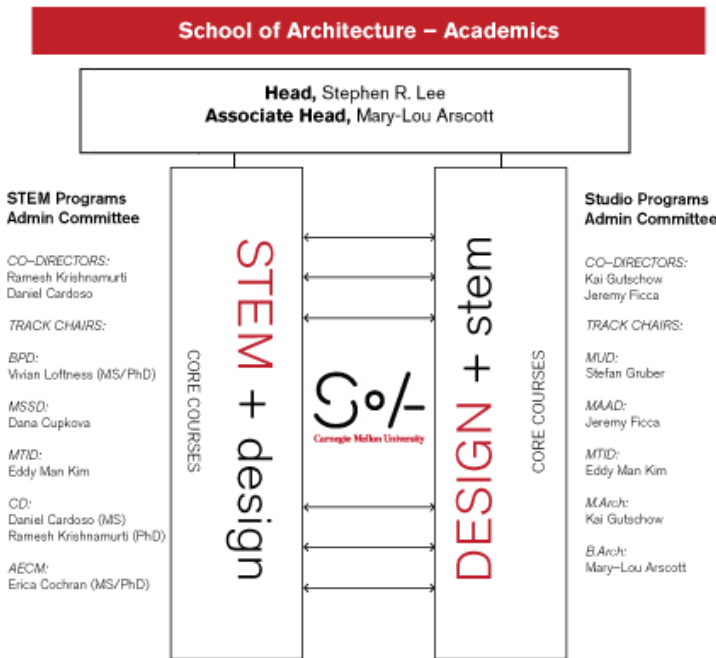
*A description of the opportunities for involvement in governance by faculty, staff, and students in the accredited program, including curriculum development.*

At the university level there is the Faculty Senate, the Staff Council and Student Senate.

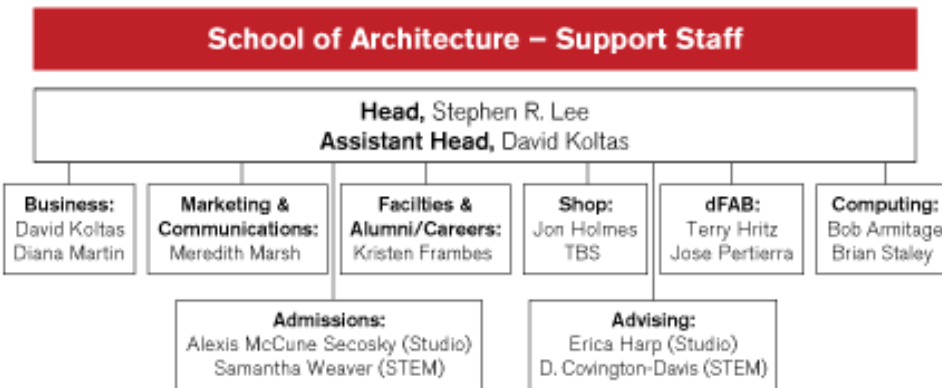
At the College level there is the College Council (faculty), for staff there is the newly formed Staff Council and for students the College Student Advisory Council.

In the SoA there are the STEM and Studio Programs Administrative Committees (faculty and staff), the Sustainable, Computation and Urban Committees (faculty). For students, there are the Graduate Student Advisory Council and the undergraduate Student Advisory Council

**The Academic Structure for the SoA:**



**The Staff Structure for the SoA:**









*A brief description of the pedagogy and methodology used to address Realm C.*

Realm C is accomplished through the sequence of courses that include:

48.215 | Materials & Assembly (spring second year)

48.315 | ES I: Climate and Energy (fall third year)

48.324 | Statics & Structures (fall third year)

48.305 | Architecture Design Studio: Integration II / 48-380, Ethics & Practice / 48-381, Real Estate Design & Development (co-requisites during spring third year)

48.432 | ES II: Design Integration of Active Systems (fall fourth year)

*A brief description of the methodology for assessing student work (i.e., "high" v. "low" pass).*

The SoA considers work receiving an "A" to be "High Pass", work receiving a "B" or "C" to be "Pass" and work receiving a "D" to be "Low Pass". The standard rubric in the SoA describes general requirements to attain the grades of A, B, C, D and R as follows:

A: Superlative or exemplary work, initiative beyond the description of the problem. Significant understanding of the problem. Conceptual clarity. An attitude of self-motivated exploration, open-mindedness, and a willingness to benefit from criticism.

B: Very good, some exemplary work, a thorough understanding of the problem. Project displays conceptual foundation, well crafted. Competence and mastery of skills. Open, inquisitive attitude.

C: Satisfactory or adequate work that meets the minimum requirements of the problem and course. Shows understanding of the problem, with some deficiencies. Reasonable mastery of skill and concepts. This grade is seen to represent the average solution.

D: Passing, work that is complete, but does not show an understanding of the problem or expectations, and demonstrates deficient skills. Work often attended with belligerent or closed-minded attitude with respect to criticism and self-motivation. Although technically passing, this work is unacceptable in a professional program and can lead to being dropped from the B.Arch program.

R: Failing work that does not meet the requirements of the studio, shows a serious deficiency in skills or is incomplete. Raises questions with respect to the future success within the program.

*Notes on Student Performance Criteria:*

*A.3 Investigative Skills: This SPC refers specifically to investigative skills rather than to the broader definition of research or scholarship. The intent is to ensure that students are able to identify, find, select, and use the full range of information resources available to them.*

*B.3 Codes and Regulations: It is not the intent of this SPC to be a complete checklist of codes that students have mastered. Rather, students must demonstrate the ability to incorporate the fundamentals of multiple codes.*

*C.1 Research: The purpose of the SPC is for students to demonstrate their understanding of the many methods of research and study that may be used in the course of identifying and selecting solutions to the problems encountered in a complex architectural project.*

*C.3 Integrative Design. This SPC requires students to demonstrate the integrative thinking and application of technical knowledge and design skills that shape complex design and technical solutions. The student work must demonstrate the ability to resolve the multiple demands of site, program, codes, environmental stewardship, and building systems through a rigorous process of decision making and then to document or represent their choices accurately. Programs are not required to demonstrate evidence of integration of all issues (i.e., environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies) simultaneously in single projects. However, students should carry out projects of sufficient complexity to achieve the learning outcomes of this SPC. Integrative design may be taught in single studios, or over multiple courses (e.g., a design studio coupled with a technical documentation course). Programs are encouraged to explore the best format for achieving this SPC.*

## II.2.1 Institutional Accreditation

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

8/22/2017

Statement of Accreditation Status



**MIDDLE STATES COMMISSION ON HIGHER EDUCATION**  
3624 Market Street, Philadelphia, PA 19104-2680. Tel: 267-284-5000. Fax: 215-662-5501  
[www.msche.org](http://www.msche.org)

### STATEMENT OF ACCREDITATION STATUS

CARNEGIE MELLON UNIVERSITY  
5000 Forbes Avenue  
Pittsburgh, PA 15213  
Phone: (412) 268-2000; Fax: (412) 268-5249  
[www.cmu.edu](http://www.cmu.edu)

Chief Executive Officer: Dr. Farnam Jahanian, Interim President

#### INSTITUTIONAL INFORMATION

Enrollment (Headcount): 6673 Undergraduate; 7288 Graduate  
Control: Private (Non-Profit)  
Affiliation: None  
2015 Carnegie Classification: Doctoral Universities - Highest Research Activity  
Approved: Bachelor's, Postbaccalaureate Award/Cert/Diploma, Master's, Post-Master's  
Credentialed Levels: Award/Cert/Diploma, Doctor's - Research/Scholarship;  
Distance Education Programs: Fully Approved  
Accreditors Recognized by U.S. Secretary of Education: National Association of Schools of Music, Commission on Accreditation

#### Instructional Locations

Branch Campuses: Carnegie Mellon University in Qatar, P.O. Box 24866, Qatar; Carnegie Mellon University, Silicon Valley Campus, Moffet Field, CA

Additional Locations: Adelaide, Australia; Carnegie Mellon University in Rwanda, Kacyiru-Kigali, Rwanda; Instituto Superior Tecnico at the Universidade Tecnico de Lisboa, Campus Alameda, Campus Alameda, Portugal; Instituto Superior Tecnico at the Universidade Tecnico de Lisboa, Campus Taguspark, Av. Prof. Dr. Anibal Cavaco Silva, Portugal; New York City, New York, NY; Universidade Catolica Portuguesa, Palma de Cima, Portugal; Universidade da Madeira, Campus Universitario da Penteada, Portugal; Universidade de Aveiro, Aveiro, Portugal; Universidade de Coimbra, Largo da Porta Ferrea, Portugal; Universidade de Lisboa, Lisboa, Portugal; Universidade do Minho, Largo do Paco, Portugal; Universidade do Porto, Reitoria da U. Porto, Portugal; Universidade Nova de Lisboa, Travessa Estevao Pinto, Portugal

Other Instructional Sites: ECE Ph.D. Program with Agency for Science, Technology and Research (A\*STAR), 1 Fusionopolis Way, #20-10 Connexis North Tower, Singapore 138632, Singapore; Electronic Arts, Redwood, CA; Heinz Washington DC Office, Washington, DC; Los Angeles Center, North Hollywood, CA; Nanjing University of Science and Technology (NUST), School of Computer Science and Technology, Nanjing University of Science and Technology, Nanjing Jiangsu 210094, China; Sun Yat-Sen University (SYSU), Sun Yat-sen University East Campus, Daxuecheng Yixian Ave, Panyu, Guangzhou, Guangdong 51006, China; The Hub at Commerce Square, Philadelphia, PA; The United Methodist Building, Washington, DC; The Westin San Jose, San Jose, CA; University of California Washington Center, Washington, DC; University of Hyogo, 7-1-28 Minatojima-minami-



machi, Chuo-ku, Kobe, 650-0047 Japan, Japan; University of Plymouth, Centre for Robotic and Neural Systems, Drake Circus, Plymouth PL4 8AA, United Kingdom

## ACCREDITATION INFORMATION

Status: Member since 1921

Last Reaffirmed: November 21, 2013

### Most Recent Commission Action:

January 3, 2017: To acknowledge receipt of the substantive change request. To include the reclassification of the additional locations at (1) Electronic Arts, 250 Shoreline Drive, Redwood, CA 94065; and (2) Los Angeles Center, Carnegie Mellon University, 4640 Lankershim Blvd., Suite 125, North Hollywood, CA 91602 as instructional sites and to include the change within the scope of the institution's accreditation. The next evaluation visit is scheduled for 2017-2018.

### Brief History Since Last Comprehensive Evaluation:

November 21, 2013: To accept the Periodic Review Report, to reaffirm accreditation, and to commend the institution for the quality of the Periodic Review process and report. The next evaluation visit is scheduled for 2017-2018.

June 30, 2014: To acknowledge receipt of the substantive change request. To note that the institution has closed its additional location at Asia & Pacific Trade Center, ATC Building ITMSF N-15, 2-1-10, Nanko-kita, Osaka-City, Japan 559-0034. To remove this additional location from the institution's accreditation. The next evaluation visit is scheduled for 2017-2018.

April 27, 2015: To acknowledge receipt of the substantive change request. To include the additional location at the Brooklyn Navy Yard, 25 Washington Avenue, Brooklyn, NY 11205 within the scope of the institution's accreditation. The Commission requires written notification within thirty days of the commencement of operations at this additional location. In the event that operations at the additional location do not commence within one calendar year from the approval of this action, approval will lapse. The next evaluation visit is scheduled for 2017-2018.

April 22, 2016: To note that institution's decision to withdraw the substantive change request for an additional location at the Brooklyn Navy Yard, 25 Washington Avenue, Brooklyn, NY 11205.

Next Self-Study Evaluation: 2017 - 2018

Date Printed: August 22, 2017

## DEFINITIONS

**Branch Campus** - A branch campus is a domestic or international location of an institution that is geographically apart, independent of the primary/main campus. The branch campus is considered independent of the main campus if it is permanent in nature; offers courses in educational programs leading to a degree, certificate, or other recognized educational credential; has its own faculty and administrative or supervisory organization; and has its own budgetary and hiring authority. (34 CFR §600.2)

**Additional Location** - An additional location is a domestic or international location, other than a branch campus, that is geographically apart from the primary/main campus and at which the institution offers at least 50 percent of the requirements of an educational program. (34 CFR §602.22) ANYA ("Approved but Not Yet Active") indicates that the location is included within the scope of accreditation but has not yet begun to offer courses. This designation is removed after the Commission receives notification that courses have begun at this location. ANYC ("Approved but Not Yet Closed") indicates that the institution has requested that the location be officially closed through the substantive change process. The location is currently included within the scope of accreditation but the institution will be stopping all operations at this location in the near future. The institution should inform the Commission (via email at [sc@msche.org](mailto:sc@msche.org)) of the date that operations cease. This designation is removed after the Commission receives

## II.2.2 Professional Degrees and Curriculum

The APR must include the following:

Title(s) of the degree(s) offered including any prerequisite degree(s) or other preparatory education and the total number of credits earned for the NAAB-accredited degree or track for completing the NAAB-accredited degree.

A table showing the distribution of general studies, required professional studies, and optional studies.

### Bachelor of Architecture:

450 CMU units (150 credit-hrs) including 135 CMU units (45 credit hours) of general studies.

Full size PDF: (<https://cmu.box.com/s/drgnmd7h6oa074fcam7ql06v2v3ja69k>)



## Curriculum Chart | Class of 2022 Bachelor of Architecture 1<sup>st</sup> Professional Degree

	2017-18		2018-19		2019-20		2020-21		2021-22	
45 units	1st Year Studio: Foundation I	S	2nd Year Studio: Elaboration I	S	3rd Year Studio: Integration I including Performance Simulation Module	S	4th/5th Year Studio: Advanced Synthesis Option I	S	4th/5th Year Studio or Thesis: Advanced Synthesis Option III	S
	1st Year Studio: Foundation II	S	2nd Year Studio: Elaboration II	S	3rd Year Studio: Integration II	S	4th/5th Year Studio: Advanced Synthesis Option II	S	4th/5th Year Studio or Thesis: Advanced Synthesis Option IV	S
	Digital Media I	M	Case Studies in Architecture & Cities	P	Enviro 1	E	Enviro 2	E	Architecture Elective	A
	Drawing I	M	Building Physics	E	Practice & Ethics/Real Estate Design & Development	P	Architecture Elective	A	University Elective	G
	Sem	P	Modern Architecture	H	Statics/Structures	B	Core 3: Arch History	H	University Elective	G
	Exploring Pittsburgh	G	Materials & Assembly	B	University Elective	G	University Elective	G	Th Prep	A
	Historical Survey of World Arch & Urbanism	H	Fundamentals of Computational Design	G	University Elective	G	University Elective	G	Architecture Elective	A
	Interpretation & Argument	G	Generative Modeling	G	University Elective	G	University Elective	G	Architecture Elective	A
	C@CM	G	University Elective	G	University Elective	G	University Elective	G	Architecture Elective	A
	9 units									
<b>Minimum Units Required: 450</b> Architecture Studio: 168 units (171 w/thesis) Architecture Coursework: 147 units General Studies/University Electives: 135 units										

**Core** **Options**

2017.07.19

S = Studio, M = Media, P = Practice, H = History, B = Building Technology, E = Environmental Science, A = Architecture Elective, G = General Studies

**Master of Architecture** (*candidacy granted 2017*):

Advanced Standing (two - year track): **180** CMU units (60 credit-hrs), Class of 2019: 18 students  
 Full size PDF: (<https://cmu.box.com/s/d3r9v35rbsdopnff7333zbfkntji1q9>)

**2nd YEAR: FALL**

#	Units	Course
48-689	0	Digital Media Primer (August Optional)
48-630	18	M.Arch Studio: Integration I/ UDBS
48-634	9	Architecture Theory
48-635	9	ES I: Climate & Energy
48-631	9	Generative Modeling
	<b>45</b>	

**2nd YEAR: SPRING**

#	Units	Course
48-640	18	M.Arch Studio: Integration II/ UDBS
48-644	3	M.Arch Pro Seminar
48-637	6	Structures/Statics
48-647	9	Materials & Assembly
48-658	9	Real Estate Design & Development
	<b>45</b>	

**3rd YEAR SUMMER**

	0	Optional Internship or Study Abroad
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**3rd YEAR: FALL**

#	Units	Course
48-650	18	ASO Studio
48-655	9	ES II: Design Integration of Active Systems
xx-xxx	9	Optional Studies
xx-xxx	9	Optional Studies
	<b>45</b>	

**3rd YEAR: SPRING**

#	Units	Course
48-660/680	18	ASO Studio or M.Arch Thesis
48-648	12	Ethics & Practice
xx-xxx	9	Optional Studies
xx-xxx	6	Optional Studies
	<b>45</b>	

**M.Arch 2-Year Distribution**

Maximum Established by Admission Review Game Plan

72	Studio
9	Computation
18	Environmental Science
15	Bldg Technology
21	Professional Practice
12	History / Theory
33	Optional Studies
<b>180</b>	<b>Total Units</b>

Minimum Established by Admission Review Game Plan

72	Studio
9	Computation
9	Environmental Science 2
0	Bldg Technology
0	Professional Practice
12	History / Theory
78	Optional Studies
<b>180</b>	<b>Total Units</b>

**Master of Architecture** (*candidacy granted 2017*):

Conventional Standing (three - year track): **270** CMU units (90 credit-hrs) NB. the first three-year class will be recruited after obtaining accreditation.

Full size PDF: (<https://cmu.box.com/s/1wj7v4kwq0wr65vqugr3x79mba60e3oi>)

**1st YEAR: FALL**

#	Units	Course
48-689	0	Digital Media Primer (August Optional)
48-610	45	M.Arch Studio: Atelier I The year-long "Atelier" studio integrates and coordinates instruction in fundamental architectural design principles, with closely related content from computing, representation, materials, construction, history, and theory.
	45	

**1st YEAR: SPRING**

#	Units	Course
48-620	45	M.Arch Studio: Atelier II The year-long "Atelier" studio integrates and coordinates instruction in fundamental architectural design principles, with closely related content from computing, representation, materials, construction, history, and theory.
	45	

**2nd YEAR SUMMER**

		Optional Study Abroad or Internship
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**2nd YEAR: FALL**

#	Units	Course
48-699	0	Digital Skills Workshop (August Optional)
48-630	18	M.Arch Studio: Integration I/ UDDBS
48-633	9	Modern Architecture
48-635	9	ES I: Climate & Energy
xx-xxx	9	Optional Studies
	45	

**2nd YEAR: SPRING**

#	Units	Course
48-640	18	M.Arch Studio: Integration II/ UDDBS
48-644	3	M.Arch Pro Seminar
48-637	6	Structures/Statics
48-647	9	Materials & Assembly
48-658	9	Real Estate Design & Development
	45	

**3rd YEAR SUMMER**

		Optional Internship or Study Abroad
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**3rd YEAR: FALL**

#	Units	Course
48-650	18	ASO Studio
48-655	9	ES II: Design Integration of Active Systems
xx-xxx	9	Optional Studies
xx-xxx	9	Optional Studies
	45	

**3rd YEAR: SPRING**

#	Units	Course
48-660/680	18	ASO Studio or M.Arch Thesis
48-648	12	Ethics & Practice
48-663	9	History Selective
xx-xxx	6	Optional Studies
	45	



*–A list of the minors or concentrations students may elect to pursue for each accredited degree offered or track for completing the NAAB- accredited degree.*

**Minor in Architectural History:** The Minor in Architectural History is intended for those students that want to deepen their knowledge in architectural history. It is earned by completing the three required architectural history courses and then an additional four elective courses in architectural history.

**Minor in Building Science:** The Minor in Building Science is intended for those students that want to deepen their knowledge in the building sciences and for those who are interested in gaining advanced placement (AMP) in the M.S. programs offered by the School in the areas of Building Performance & Diagnostics and Sustainable Design. It is earned by completing the two required building technology and three environmental science courses and then an additional three elective courses in the building sciences.

**Minor in Architectural Representation and Media:** The Minor in Architectural Representation and Media is intended for those students that want to deepen their knowledge in architectural representation and media and for those who are interested in gaining advanced placement (AMP) in the M.S. programs offered by the School in the areas of Computational Design, Tangible Interaction Design and/ or Emerging Media. It is earned by completing the four required media courses and then an additional three elective courses in these areas.

**Minor in Architectural Design Fabrication:** The Minor in Architectural Design Fabrication is intended for those who wish to develop focused, disciplinary expertise in both analog and digital material methods for shaping the built environment and become involved in a community of practice dedicated to a rigorous pursuit of making as a mode of architectural research and cultural expression. It is also for students interested in gaining advanced placement in the SoA's Master of Advanced Architectural Design (MAAD) program.

*–A list of the minimum number of semester credit hours or the equivalent number of quarter credit hours required for each semester or quarter, respectively.*

To maintain undergraduate or graduate full time status at CMU, a student must register for 36 CMU units (12 credit-hours).

To graduate in the number of semesters as specified in official curricula, both the B.Arch and M.Arch programs require a minimum of 45 units per semester (15 credit-hours) .

*–A list of off-campus programs, description of facilities and resources, course requirements, and length of stay.*

The SoA does not maintain a permanent off-campus facility for Study Abroad, rather, we work with the Carnegie Mellon Office of International Education (OIE) to promote a plethora of Study Abroad opportunities. From the OIE website,

*“Carnegie Mellon continually seeks opportunities to partner with institutions abroad to exchange students, faculty, and researchers. Because of Carnegie Mellon's active approach to making international connections, we have several exchange partners abroad. These programs are based on faculty relationships between the two institutions and have been evaluated for academic compatibility.*

*University Exchange Programs allow students, in most cases, to use their Carnegie Mellon funding while attending a university abroad. These programs are reciprocal. We also receive students from the institutions to which we send students. This allows Carnegie Mellon students to build friendships with the students from that institution both prior to and during the study abroad experience, providing a true cultural exchange.*



*Carnegie Mellon students participating in these programs continue to pay tuition (billed at the junior/3rd-year level) directly to Carnegie Mellon and receive, in most cases, the same financial aid package. Students are responsible for paying all other fees, such as room and board, directly to the exchange institution.*

*Sponsored Programs offer study abroad opportunities to students from a variety of economic backgrounds and are ideal for students with significant Carnegie Mellon funding. Sponsored Programs allow students to pay regular Carnegie Mellon tuition, room and board (billed at the junior year rate) while receiving the same financial aid package (minus work study) while abroad. Offering Sponsored Programs reflects Carnegie Mellon's commitment to ensure that all students have the opportunity to study abroad. While the main purpose of Sponsored Programs is to provide options that will allow the use of Carnegie Mellon aid, they are also programs that are researched and reviewed for academic quality and compatibility by our Study Abroad Advisory Board.*

*When choosing the Sponsored Program arrangement, Carnegie Mellon will pay tuition, room, board and approved fees to the study abroad institution or program and may distribute funds to the student for other fees as appropriate.*

*Departmental Exchange Programs function similarly to University Exchange Programs, except that the exchange is department-to-department instead of university wide. Many departments at Carnegie Mellon have exchange partners abroad. These programs are based on faculty relationships between the two departments and have been evaluated for academic compatibility.”*

Students in the B.Arch program have access to University Exchange programs with the National University of Singapore and the Ecole Polytechnique Fédérale de Lausanne.

Students also have access to Sponsored Exchange programs in Australia, Denmark, Germany, Italy, Japan, New Zealand, Spain, and the United Kingdom and External programs in Australia, China, Czech Republic, Finland, France, Hong Kong, Ireland, Italy, Korea, Latvia, New Zealand, Poland, Spain, and the United Kingdom.

Beyond semester or year abroad programs, Study Abroad opportunities are available to fourth and fifth year students in the B.Arch in through the Global Studio Fund (GSF). The GSF endowment was created by the Head and his wife, Yoko Tai, based on their recognition that Study Abroad is critical to an architect's education in these days of increased globalization. ASO professors propose a travel component to a fall or spring studio that they will be teaching. Students sign up for that studio knowing that it will include a travel component during summer, winter or spring break. The endowment covers all faculty travel and per diem expenses and housing for the students. The students are responsible for their own travel expenses, and those in financial need can apply for scholarships through the Altenhof Fund. The GSF has supported study abroad in London, UK; Barcelona, ES; Bratislava, SK; Madrid, ES and Vicenza, IT (S18).

The Theater Architecture program was created by Len Auerbach, an alumnus of the SoA and CFA (CFA66, CFA67). The Theater Architecture has supported travel to Avignon, FR; Havana, CU; San Francisco, CA; Las Vegas, NV and New York City, NY.

The SoA subsidizes field trips in every year of the B.Arch curriculum in order to enable students and faculty to interact and learn from each other in very different settings than can typically be found on campus. The core studios in years 1-3 take an annual field trip to destinations such as Detroit, New York, Boston, Cincinnati or Cleveland.

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

Studio-based Programs

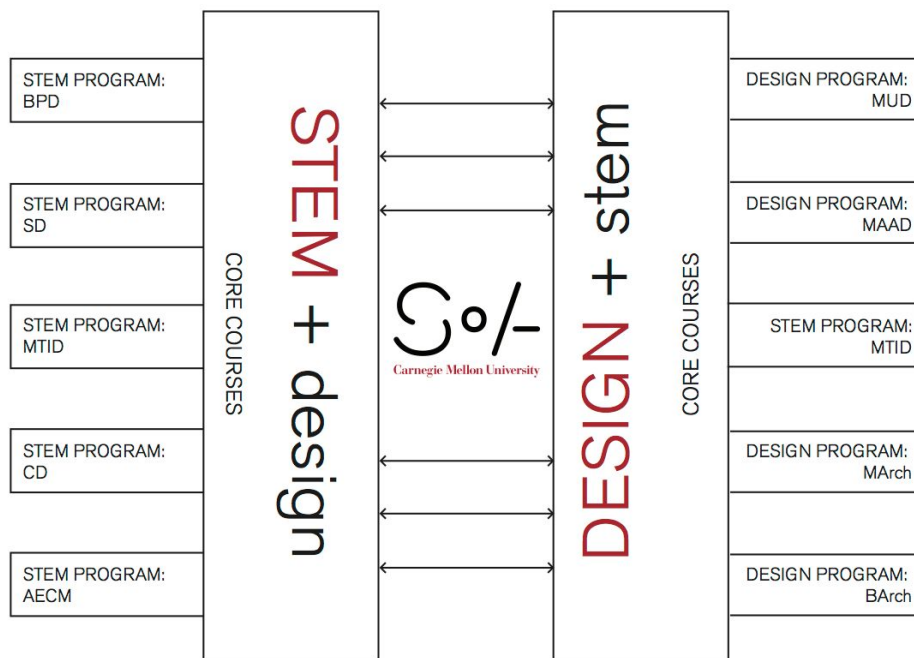
- [Bachelor of the Arts in Architecture](#)
- [Master of Advanced Architectural Design \(MAAD\)](#)
- [Master of Urban Design \(MUD\)](#)
- [Master of Tangible Interaction Design \(MTID\)](#) (F17 merged into MSCD)

STEM-based Programs

- [Master of Science in Architecture Engineering Construction Management \(MSAECM\)](#)
- [Master of Science in Building Performance & Diagnostics \(MSBPD\)](#)
- [Master of Science in Sustainable Design \(MSSD\)](#)
- [Master of Science in Computational Design \(MSCD\)](#)
- [Master of Tangible Interaction Design \(MTID\)](#) (F17 merged into MSCD)

PhD & Doctoral Programs

- [PhD in Architecture Engineering Construction Management](#)
- [PhD in Science in Building Performance & Diagnostics](#)
- [PhD in Science in Computational Design](#)
- [Doctor of Professional Practice \(DPP\)](#)



A description of the progress for changing the title of any non-accredited, post- professional degree that uses the degree title B. Arch., M. Arch. or D. Arch.

We do not currently offer post-professional degree programs that use the titles B.Arch, M.Arch or D.Arch.

## II.3 Evaluation of Preparatory Education

*The APR must include the following:*

*A description of the policy or policies regarding admission requirements and admissions decisions.*

### **Undergraduate Admission:**

Together, the university's Office of Admission (OA) and the SoA handle new undergraduate and internal transfer admissions. The undergraduate application to the SoA is a two-part process:

**Application:** Candidates apply to the SoA through the undergraduate OA using the Common Application. The university's admission office receives and evaluates all materials submitted as part of the Common Application (general application, transcripts, standardized test scores, essays, letters of recommendation, etc.)

**Portfolio:** Applicants submit their required portfolio to the SoA through SlideRoom for either online or on-campus review. Candidates that register for an in-person review will come to campus for an interview with an architecture faculty member to discuss their portfolio submission and for presentations about the SoA and facility tours.

The admission decision is made jointly by the undergraduate OA and the SoA. The OA reserves the right to deny admission to any candidate on the basis of low TOEFL score and/or low predictive factor regardless of strength of portfolio. They reserve this right to prevent applicants from finding an easy "door" into CMU.

Applications are evaluated in the following manner:

**OA:** Admission directors reading and evaluating undergraduate applications review the common applications. An Associate Director of Admission who is responsible for liaising with the SoA leads the OA committee. Meg Ryan has been our liaison for the last five years and has an excellent understanding of what the SoA is looking for in a successful applicant.

**SoA:** The Associate Head and the Assistant Director of Studio-Based Programs chair the SoA undergraduate admission committee. Architecture portfolios are reviewed (online or in-person) by faculty and select fourth- and fifth-year students. A series of joint (OA + SoA ) admission committee meetings are held to determine undergraduate admission decisions. The Head of the SoA attends all joint admission committee meetings.

### **Internal Transfer Applications:**

Once students are enrolled at Carnegie Mellon, the SoA's Academic Advisor facilitates program transfer requests. Scores for Advanced Placement (AP) or International Baccalaureate (IB) exams are received by the OA and provided to the School's Academic Advisor for academic credit according to the standards established by the university.

The school's Academic Advisor evaluates coursework for transfer credit according to the standards established by the university and the SoA. Students must provide official transcripts and other documentation requested for the evaluation of transfer credit. The SoA Head must interview each applicant. If admitted, transfer units applied toward graduation are limited to a maximum of 45 (15 credit-hours).

## II.4 Public Information

### II.4.1 Statement on NAAB-Accredited Degrees

NAAB Accreditation Statement for the Bachelor of Architecture Program

<https://soa.cmu.edu/accreditation>

### II.4.2 Access to NAAB Conditions and Procedures

2014 NAAB Conditions for the Bachelor of Architecture Program

<https://soa.cmu.edu/s/2014-NAAB-Conditions.pdf>

2015 NAAB Procedures for the Bachelor of Architecture Program

<https://soa.cmu.edu/s/2015-NAAB-Procedures.pdf>

### II.4.3 Access to Career Development Information

Career Development Information for the Bachelor of Architecture Program

<https://soa.cmu.edu/career-development>

### II.4.4 Public Access to APRs and VTRs

2012 APR for the Bachelor of Architecture Program

[https://soa.cmu.edu/s/2012\\_NAAB\\_APR\\_CMU.pdf](https://soa.cmu.edu/s/2012_NAAB_APR_CMU.pdf)

2012 VTR for the Bachelor of Architecture Program

<https://soa.cmu.edu/s/CMU-VTR-2012-Public>

### II.4.5 ARE Pass Rates

NCARB ARE Pass Rates for the Bachelor of Architecture Program

ARE 4.0: <https://www.ncarb.org/pass-are/are4/pass-rates/are4-pass-rates-school>

ARE 5.0: <https://www.ncarb.org/pass-are/are5/pass-rates/are5-pass-rates-school>

### II.4.6. Admissions and Advising

Admissions for the Bachelor of Architecture Program

<https://soa.cmu.edu/undergraduate-admissions>

Advising for the Bachelor of Architecture Program

<https://soa.cmu.edu/student-organizations>

### II.4.7. Student Financial Information

<https://www.cmu.edu/sfs/>

## PART THREE (III): REPORTS

### III.1.1 Annual Statistical Reports

*The APR must include a statement signed or sealed by the official within the institution responsible for preparing and submitting statistical data that all data submitted to the NAAB through the Annual Report Submission system since the last site visit is accurate and consistent with reports sent to other national and regional agencies including the National Center for Education Statistics.*

**Carnegie  
Mellon  
University**  
Institutional  
Research and  
Analysis

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March 16, 2017

To Whom It May Concern:

The below information submitted to the School of Architecture at Carnegie Mellon University for their annual NAAB submission is accurate and consistent with reports sent to other national and regional agencies, including the National Center for Education Statistics:

Section A, questions 9(a) and 9(b)  
Section B, question 7, 'B. Architecture'  
Section D  
Section E  
Section G

Thank you,



Melissa L. Baker  
Assistant Director  
Institutional Research and Analysis  
[mlbaker@andrew.cmu.edu](mailto:mlbaker@andrew.cmu.edu)  
412-268-6342

### III.1.2 Interim Program Reports

*These are NOT to be included in the APR. The NAAB will provide the following directly to the team at the same time as the VTR template and other materials. These reports will be provided by NAAB headquarters.*

## **APR – SECTION 4 – SUPPLEMENTAL MATERIAL**

*The program shall provide a number of documents for review by the visiting team.*

The general link to the SoA NAAB folder on the CMU Box is:

<https://cmu.box.com/s/k8o30j8dq56qoy9ua7qiblgas2fhztgo>

Inside the SoA NAAB folder are:

Faculty Resumes:

<https://cmu.box.com/s/b0ztueeg56g1o2vltle6irydogqf0i0o>

Course Descriptions:

<https://cmu.box.com/s/77ehvh7co9cy1q49y6hcz7f152ytkr05>

The following URL's link to official SoA or CMU web pages:

Studio Culture Policy (contained in the Undergraduate Student Handbook):

[https://soa.cmu.edu/s/2017-18\\_SoA-Undergraduate-Student-Handbook.pdf](https://soa.cmu.edu/s/2017-18_SoA-Undergraduate-Student-Handbook.pdf)

Self-assessment policies and objectives:

<https://www.cmu.edu/middlestates/2018-self-study/index.html>

Policies on academic integrity for students:

<https://www.cmu.edu/student-affairs/ocsi/>

Policies relative to computing and information resources:

[https://www.cmu.edu/student-affairs/theword/acad\\_standards/creative/computing.html](https://www.cmu.edu/student-affairs/theword/acad_standards/creative/computing.html)

Policies and procedures relative to EEO/AA for faculty, staff, & students:

<https://www.cmu.edu/policies/administrative-and-governance/equal-opportunity-affirmative-action-ada.html>

Policies regarding opportunities for human resources professional development services:

<https://www.cmu.edu/hr/resources/hr-partners/pds.html>

Guidelines for faculty appointment, promotion, and tenure:

<https://www.cmu.edu/policies/faculty/appointment-and-tenure-policy.html>