NAAB

National
Architectural
Accrediting
Board, Inc.

*Architecture
Program Report*

New Jersey Institute of
Technology

21 September 2022

NAAB

Architecture Program Report (APR)
2020 Conditions for Accreditation
2020 Procedures for Accreditation

Institution	<u>**New Jersey Institute of Technology**</u>
Name of Academic Unit	New Jersey School of Architecture

Degree(s) *(check all that apply)*
 	
Track(s) *(Please include all tracks offered by the program under the respective degree, including total number of credits. Examples:*
 	
150 semester undergraduate credit hours
 	
Undergraduate degree with architecture major + 60 graduate semester credit hours
 	
Undergraduate degree with non-architecture major + 90 graduate semester credit hours)
	x <u>Bachelor of Architecture</u>
	
	    Track: 150 semester undergraduate credit hours
	
	x <u>Master of Architecture</u>
	
	    Track: non-pre-professional degree + 90 NJIT graduate semester credit hours

Application for Accreditation	**Continuing Accreditation**
Year of Previous Visit	2014
Current Term of Accreditation *(refer to most recent decision letter)*	**Continuing Accreditation** Eight-year term
Program Administrator	**Darius Sollohub**, AIA, Professor and Interim Director of the School of Architecture
Chief Administrator for the academic unit in which the program is located *(e.g., dean or department chair)*	**Gabrielle Esperdy**, Ph.D., Professor and Interim Dean Hillier College of Architecture and Design 533 Weston Hall New Jersey Institute of Technology University Heights Newark, NJ 07102-1982 esperdy@njit.edu Tel: (973) 596-3026

Chief Academic Officer of the Institution	**Atam P. Dhawan**, Ph.D., Interim Provost and Senior Executive Vice President Office of the Provost 410 Fenster Hall New Jersey Institute of Technology University Heights Newark, NJ 07102-1982
President of the Institution	**Teik C. Lim**, Ph.D, University President Office of the President Fenster Hall New Jersey Institute of Technology University Heights Newark, NJ 07102-1982
Individual submitting the APR	**Darius Sollohub**, AIA, Professor and Interim Director of the School of Architecture
Name and email address of individual to whom questions should be directed	**Darius Sollohub**, AIA, Professor and Interim Director of the School of Architecture sollohub@njit.edu Tel: (973) 596-5574

Submission Requirements:
- The APR must be submitted as one PDF document, with supporting materials
- The APR must not exceed 20 MB and 150 pages
- The APR template document shall not be reformatted

INTRODUCTION

Progress since the Previous Visit (limit 5 pages)

In this Introduction to the APR, the program must document all actions taken since the previous visit to address Conditions Not Met and Causes of Concern cited in the most recent VTR.

The APR must include the exact text quoted from the previous VTR, as well as the summary of activities.

Program Response:

Conditions Not Met
The Conditions noted here are from the previous 2009 Conditions for Accreditation:

1.2.1 Human Resources & Human Resource Development
[X] Human Resources (Students) are inadequate for the programs

2014 Visiting Team Assessment:
Commitment to student achievement in design studio courses and engagement with studio faculty is strongly present in both the B.Arch. and M. Arch programs—students widely appreciate the faculty commitment to their achievement in these settings. However, the commitment to student achievement is challenged in lecture courses particularly in the B. Arch program, where course enrollments range from 120:1 to 160:1 student faculty ratios in required coursework in Arch 223-323 Construction I-II, ARCH 251-252 History I-II and ARCH 381 History III, ARCH 227-327 Environmental Controls I-II, ARCH 229-329-429 Structures I-II-III, and ARCH 558 Professional Practice. Lecture course enrollment levels that have increased through recent enrollment growth present challenges to student achievement when teaching modes, as well as room capacities are stretched.

2016 Interim Progress Report Response:
All large undergraduate lecture courses currently have a faculty to student ratio of less than 90:1 and, in some cases, have been split into two separate sections.

2019 Interim Progress Report Response:
Satisfied by Two-Year IPR.

2022 Program Response:

Lecture Courses
A significant revision to the B.Arch curriculum from 163 credits to 150 credits was implemented in fall of 2021. The reduction of credits was possible, in part, by reducing the allied course sequences (History of Architecture, Construction, Structures, Environmental Control Systems and Professional Practice) from three semesters to two semesters (fall-spring) as a result of assessment based on the NAAB 2020 Conditions and the NJIT Strategic Plan 2025.

Current Lecture Courses and Enrollments:
The B.Arch second-year lecture courses include the fall semester ARCH 210 History of Architecture I (fall 2022 enrollment equals 110 students), ARCH 223 Construction I (fall 2022 enrollment equals 125 students) and the spring semester ARCH 211 History of Architecture II and ARCH 224 Construction II (spring 2023 enrollments are expected to be similar).

The B.Arch third-year lecture courses include the fall semester ARCH 303 Structures I (fall 2022 enrollment equals 100 students), ARCH 309 Environmental Control Systems I (fall 2022

enrollment equals 105 students) and the spring semester ARCH 304 Structures II and ARCH 314 Environmental Control Systems II (spring 2023 enrollments are expected to be similar).

The B.Arch fourth-year lecture courses include the fall semester ARCH 472 Professional Practice I (fall 2022 enrollment equals 85 students) and the spring semester ARCH 475 Professional Practice II (spring 2023 enrollments are expected to be similar).

Upper Level Electives (Seminars)
As part of the curriculum change, the third course in the allied course sequences has been replaced with a specialized upper level architecture elective with a student-to-faculty ratio of 15:1. The B.Arch curriculum now requires two technology electives (to be taken in fourth year) and two history/theory electives (to be taken in fifth year), in addition to five general architecture electives (to be taken from the spring of third year to fifth year). This curricular change allows for more courses structured as seminars and the teaching of more specialized knowledge.

New Required Courses with Hybrid Formats
Three new required courses were developed in the new B.Arch curriculum, each with a different class type and format.

ARCH 110 Tools and Techniques I: Introduction to Architecture Thinking
This first year fall semester course was first offered in fall 2021. In fall 2022, eleven sections each have a student to faculty ratio of 16:1. The course is scheduled two times per week for 1.5 hours. All sections meet together for the first class meeting for a lecture led by the two faculty co-coordinators. The second class meeting is structured as smaller recitation sections. Five adjunct faculty each teach two sections. An Honors section is taught by one of the faculty co-coordinators.

ARCH 561 Synthesis Seminar
This upper level course is structured as a practicum course that synthesizes and integrates the subject matter covered in the allied courses and applies it to the co-requisite ARCH 595 Advanced Architecture Studio II. All sections have a student-to-faculty ratio of 15:1.

ARCH 324 Landscape and Urbanism
This third year course is structured as a large lecture course, and has been offered every semester –fall 2021, spring 2022, summer 2022, fall 2023– in order for all students to complete it prior to graduation. The fall 2022 enrollment equals 134 students, due to the fact that the course will be offered in fall only moving forward (with a potential summer offering). TA's provide recitation sections (see "Teaching Assistants" below).

Studios
All B.Arch and M.Arch studios have a student to faculty ratio of 15:1.

Room capacities
Large lecture courses are now scheduled in Weston Lecture Hall I in addition to other large lecture halls across campus.

Teaching Assistants
Thirty-five graduate teaching assistantships are currently available for M.Arch students (students receive a tuition reduction and a stipend). TA's are assigned to the library, to the shops, and to large lecture courses. All undergraduate allied courses (History of Architecture, Construction, Structures, Environmental Control Systems, Professional Practice and Landscape and Urbanism) now benefit from multiple teaching assistants. One TA is assigned to every 33 students in a course; therefore, the majority of the large lecture courses have 3 TA's.

Causes of Concern
2014 Visiting Team Assessment:

A. Facilities

1. Despite four major renovations and additions since its opening in 1998, Weston Hall currently lacks a suitable auditorium for large lecture classes and related events. Room 160, the school's only available large-capacity auditorium, is in serious disrepair: worn and missing seats, inadequate ventilation, inadequate lighting, and significant material wear and tear. In overflow lectures such as ARCH 251 History I and ARCH 223 Construction I the seating shortage requires students to sit on the floor in the aisles, as they did during the all-student meeting for this visit. During all the meetings the team held in Weston Lecture Hall 1, several members suffered acute and unmistakable reaction to poor air quality, causing the team to suspect the presence of mold.

2. The traditional wood and metal fabrication shop is oddly located and disproportionately small and crowded, compared to adjacent digital fabrication labs. Workbenches and work areas appear to be too tightly packed, compromising both productivity and safety.

4. Other problems cited by students include poor air quality, bug and rodent infestation, leaks, non-functioning elevators, building disrepair, and inadequate custodial support. [NOTE: The program reports that the elevator repair is now completed.].

5. With their studio space consigned to a remote location, graduate students feel isolated from the rest of the school and college—one student described it as "Siberia." Distance from the undergraduate studios and college facilities robs them of significant aspects of the life and culture of the college.

6. Human Resources and HR Development
Seven hundred B. Arch students must compete for the time and attention of a single professional advisor, which seriously compromises equitable access to academic and administrative guidance. This issue surfaced quickly during discussions with students and faculty throughout the visit. The combination of growing undergraduate program enrollment, inadequate auditorium facilities, and limited staffing has led to classes so large that single faculty members without teaching assistants find it difficult to deliver material and evaluate course assignments at the level and depth required to fulfill any curricular goals beyond minimal engagement. Large lecture classes such as Architectural History, Construction, and Professional Practice are especially affected by this confluence of factors.

2016 Interim Progress Report Response

1. Lecture Hall Deferred Maintenance:
Since the team visit in 2014, the University has initiated a full refurbishment plan for the large Weston Lecture Hall as part of a University wide maintenance campaign for all Lecture Halls (see attached document from Marvel Architects).

2. Wood and Metal Shop:
Additional fabrication facilities including a 3D print room with 25 printers and a CNC lab with 3 flatbed milling machines and one, 7 axis, robot arm have been added to reduce the demand on the traditional shops.

3. General Facilities Problems:
University Facilities Department has surveyed and documented room by room deficiencies in order to address them in a deferred maintenance plan which has already begun to address the acute problems like leaks and chronic HVAC problems. More custodians have been assigned to

the daily building maintenance regimen. Since the repairs were completed, the elevators now work.

"Siberia":
All studios have been moved back into Weston Hall and its contiguous spaces in Colton and Campbell Halls.

2019 Interim Progress Report Response:
Satisfied by Two-Year IPR.

2022 Program Response:

1. Lecture Hall Deferred Maintenance:
A complete renovation of Weston Lecture Hall 1 and 2 was completed in January 2021 by Marvel Architects at a cost of $2.65 million. The project included upgraded finishes, new furniture, and a new audiovisual system. Additional power and high-capacity wireless connectivity provides our students with a modern learning environment. A ribbon-cutting ceremony for the new Lecture Hall spaces was held in September 2021, in conjunction with the first lecture series event of the academic year.

2. Wood and Metal Shop:
The Hillier College provides various fabrication facilities geared for students in all programs (architecture, interior design and industrial design) to create physical models and prototypes of their work. The Wood Shop, Laser Lab, Metals Lab, Paint Room and Casting Lab are all located on the seventh floor of Weston Hall. The Wood Shop includes a 5' x 5' flatbed CNC router. The Metals Lab includes a vertical CNC mill. The Laser Lab has two SLA printers and three laser cutters. A 7-axis robot arm is located on the lower level.

In addition to these facilities, the College also houses various labs such as the Electronics Lab, Game Lab, Physical Computing Lab, and Animation Lab. These are equipped with 3D scanners, sensors, motion capture equipment, film and video equipment and video game and legacy consoles. There is also a Materials Library that holds materials procured to facilitate the integration of materials research and applications in studio and related courses.

A unique aspect of our College is that the NJIT AIAS chapter operates several "by-students, for-students" services: the Print Room, 3D Lab, and Supply Shop. The Print Room has two plotters and provides plotting, cutting and mounting, as well as printing, binding and business card services to all students (and faculty). The 3D Lab provides 3D printing services to all students. The lab has (15) "Ultimaker 2+" and "Ultimaker 2 Extended+" 3D printers. This semester the students plan to replace (4) of these printers, buy motherboards for the remaining Ultimaker machines, and purchase (2) "Creality Ender 3 S1 Pro" and (2) "Creality CR 30" machines.

All students also have access to NJIT's premier Makerspace, opened in December 2017. The NJIT Makerspace is a state-of-the-art design and fabrication facility that prepares future multidisciplinary STEM employees for the purposes of innovation, invention and production. It is equipped with 3D printers, laser cutters, metal machining, a woodshop and much more. The space can be used for personal projects, entrepreneurial prototypes, course assignments and research initiatives.

4. General Facilities Problems:

Extensive work is currently being conducted on the building envelope to address water infiltration.

5. "Siberia":
A space needs analysis was completed by Marvel Architects in November 2019, which outlined a total studio capacity of 746 seats. According to the NJIT Admissions Enrollment Dashboard 9/14/2021, there were 706 undergraduate, 60 graduate and 8 PhD students in the College for a total of 774 students. In preparation for the fall of 2022 and the University's projection of 803 students in the College, it was necessary to plan for additional growth. This was completed through increased densification of studio spaces, the renovation of several spaces inside the building, and the expansion of three studio spaces in the Student Mall across the adjacent Warren Street.

6. Human Resources and HR Development
Academic Advising:
There are two undergraduate advisors for the College. One advisor is assigned students with last names starting A – L, the other is assigned students with last names starting with M – Z. One is a senior academic advisor and also advises the graduate students of the College (M.Arch, M.S.Arch, and MUD). This provides a more equitable distribution of students to advisors. Additional resources for students are available on the College Academic Advising webpage.

Large lecture courses:
Please see "Conditions Not Met" above regarding current lecture course sizes, the ARCH 110 Tools and Techniques lecture & recitation model and the ARCH 561 Synthesis Seminar structure as a practicum course.

Teaching Assistants:
Please see "Conditions Not Met" above regarding the graduate teaching assistants assigned to the undergraduate lecture courses.

Program Changes

Further, if the Accreditation 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.

This section is limited to 5 pages, total.

Program Response:

- The B.Arch curriculum change, and the development of ARCH 561 Synthesis Seminar and 595 Advanced Architecture Studio II (B.Arch) and ARCH 547G Synthesis Seminar and 506G Advanced Architecture Studio II (M.Arch) to address **SC.5 and SC.6**.

- The NJSoA is responding to the new NAAB language for **Shared Values** in various ways and places in the programs. Each topic is addressed in Section 2 of this report. A survey is planned for the coming year to help clarify shared values unique to NJIT and to consider responses to NAAB suggestions in the Template and in the Guidelines.

- The team should look for a new emphasis on **diversity, equity, and inclusion** in sections of this APR on hiring, planning, and the learning culture policy. Statistics on the diversity of architecture students and faculty are posted on the NJSoA website in our annual statistical reports.

  Diversity is a pillar of NJIT's 2025 Strategic Plan. At the University level, 2021 marked the most diverse first-year class in history (see the article on the website here). In 2021, the number of first-year students that identified as Black or Hispanic nearly doubled since

2016, making up 10% and 25% of the freshman class. The University prides itself on the fact that it was ranked #1 Nationally in Student Economic Upward Mobility by Forbes.

On the NJIT Admissions Enrollment Dashboard, in 2021 the Hillier College's entering student class was 14% Asian, 8% Black, 29% Hispanic, 9% International, 3% MultiRace, 34% White and 3% Unknown. In the fall of 2021, Architecture was the only College in the University to enroll more females (395) than males (375).

With regard to our full-time faculty, while the School has lost four tenured female faculty members in the past few years (three due to retirement, and one, the Director of the School, to another job opportunity), our Interim Dean is female. We are actively engaged in efforts to diversify our faculty to more closely mirror the diversity of our students. We have opportunities this year with searches for three faculty lines, and next year for a new dean of the College. Searches will adhere to the University Faculty Search and Selection Guidelines: Hiring for Inclusive Excellence which outlines "...three fundamental tasks necessary for inclusive excellence that will guide our hiring efforts: 1) broadening the applicant pool; 2) minimizing implicit bias in evaluation; and 3) creating a welcoming climate that sells candidates on the university, and on the community."

- In order to address the NAAB change from requiring a studio culture policy to a policy on our teaching/learning culture, the AIAS, throughout the spring of 2022, created a new NJSoA Learning Culture Teaching Policy (LCTP) document. The Director charged them with this exercise, and they worked with their club advisor and an ad hoc faculty group. The process, which yielded a series of meetings about how to advance a sense of community in the SoA and HCAD, was as important, if not more important, than the outcome. The policy is posted here.

- There has been an increase at NJIT in **planning and assessment activities** at the Institute, college, and school levels corresponding to the shift in expectations in the new NAAB *Conditions* with respect to measurable outcomes.This is outlined in Section 5.2 in this report.

Program Learning Objectives:

BArch - https://www.njit.edu/academics/degree/bachelor-architecture-barch#learning-outcomes

MArch - https://www.njit.edu/academics/degree/master-architecture-march#learning-outcomes

Strategic Planning and Accreditation Reviews
- **Institute**
  Middle States review
  Building on a Strong Foundation, NJIT 2025 Strategic Plan - KPI's at end of document
- **HCAD**
  A strategic planning process initially conducted by The Intersol Group (https://intersol.ca/) is in progress. Draft 2 of the NJIT HCAD Strategic Plan 2025 is available here, and discussed more in Section 5.2.3.
- **NJSoA**
  KPI's 2014 – 2021 (NJSoA & NJIT)

Meetings and Events
We will continue to use these regular meetings and periodic events listed below to assess and advance our curriculum, both of our accredited programs and our school.

- **HCAD**
  HCAD Full-time Faculty Meetings (2–3x semester)
  Weekly Leadership Team meetings
  Weekly one-on-one meetings with Dean and each Director
  Weekly Advisor meetings
  Monthly Admissions meetings with leadership team
  Regular Advisory Board meetings
  Annual Dean's Alumni Council meeting
  Student Leadership Meetings (2x semester)
  Periodic Tenured Faculty Meetings
  Fall and Spring Student Award Ceremony
  Annual Design Showcase Event (major fundraising event with exhibition, student design competition, career fair, alumni reception and lecture)

- **NJSoA**
  2016 Design Intelligence Workshop
  2021 Living w/Waste Symposium w/Pratt
  Curriculum committee meetings (on average, monthly)
  Biweekly meetings of Director and faculty Program Coordinators
  Studio coordinator meetings (2x semester) and creation of studio curriculum chart
  Monthly faculty meetings

Curricular Assessment and Outcomes
- **NJSoA**
  Major curricular revisions to three programs (see a complete description here):
  B.Arch (163 credits to 150 credits, implemented in fall 2021)
  BS.Arch (revisions to courses to maintain 120 credits implemented in fall 2021)
  M.Arch (102 credits to 90 credits, implemented in fall 2020, see detailed before and after curricular charts here)
  New categorization of approved electives by curriculum committee (history/theory, technology, and general architecture)
  Revised programs
  New Learning Teaching Culture Policy document

NARRATIVE TEMPLATE

1—Context and Mission

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

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

Program Response:
Institutional Context and Setting
The New Jersey Institute of Technology (NJIT) is a public University on a 48-acre campus in Newark, NJ, founded and committed to helping motivated and talented students in polytechnic disciplines. NJIT serves 11,901 students in 126 degree programs and generates $156 million in research. Students attend NJIT's six schools and colleges from approximately 90 different countries. Proud of its founding as a commuter school serving a need for technically-skilled workers in 1881 to its national and international renown and ranked public research university, NJIT still serves Pell-eligible students (39% of incoming students) and students who are the first in their families to attend college (24%). NJIT is also committed to serving and engaging with the Newark community. The current strategic plan *Building on a Strong Foundation--NJIT 2025,* can be found on the University website here. The NJIT Annual Institutional Profile Report 2021 can be found here. Key facts about the University are outlined on the website here. The New Jersey School of Architecture (NJSoA), est. 1973, exists in the Hillier College of Architecture and Design (HCAD) at NJIT.

Impact on Pedagogy and Development
The vision and the mission for the Institute (see *Building on a Strong Foundation--NJIT 2025*) fit closely with the NAAB Shared Values as described in the 2020 *Conditions*, resulting in support for, and recognition of, goals and priorities of both NJSoA and HCAD. NJIT's 2025 Strategic Plan, the HCAD Strategic Plan and NJSoA long-range planning connect aspirations to future 2020 *Conditions*.

> **HCAD vision:** A comprehensive design school, in a top-tier research university, dedicated to creative design and making in physical and virtual worlds..
> **NJSoA Vision:** Our goal is to produce creative thinkers, competent professionals, and engaged citizens who will meet their ethical responsibilities to the environment and to the society in which we live.

An example of how the mission of the Institute influences the program would be the resources they provide for studio projects sited in Newark and the strong community relationships that shape future projects. The Institute also supports the labs, workshops, and both software and hardware that make it possible for the program to graduate students with 21st-century relevant skills.

Delivery Format
NJIT's primary delivery format is in-person or asynchronous online. This fall the NJSOA received approval to offer upper-level studios as hybrid (60% in person and 40% synchronous delivery) due to space constraints not related to COVID issues. Four courses are offered either online or hybrid. All other courses take place on campus.

The program's role in and relationship to its academic context and university community, including how the program benefits–and benefits from–its institutional setting and how the program as a unit and/or its individual faculty members participate in university-wide initiatives

and the university's academic plan. Also describe how the program, as a unit, develops multidisciplinary relationships and leverages unique opportunities in the institution and the community.

Program Response:
Benefits to, and from, Institutional Setting
The HCAD has a diverse set of highly qualified students and faculty engaged in the study and exploration of architecture, art, and design at a variety of scales and sizes. Embedded in an R1 Carnegie-classified research university, Architecture programs are committed to incorporating 21st century technology-enabled design processes into traditional concerns of form, order and beauty across all disciplines. This enables students to develop their own design processes augmented by ubiquitous information technology as they participate in an important and growing collaborative environment to more effectively address critical issues of our time. Among the issues addressed by various components of the Architecture programs–and the College–are sustainability, adaptability, interactivity, social relevance, utilization of technology in the processes and products of creating the built environment, new materials, and more.

The Architecture programs benefit the Institute in their support of the mission, vision, and values expressed in the 2025 NJIT Strategic Plan. The NJSoA contributes to the Institute's goals with respect to diversity and sustainability–two of the "four pillars" cited as the basis for the Plan (preceded by *Vision 2020*, an example of cyclical planning and assessment on the part of the Institute). See Section 2 of this APR. A third pillar in the NJIT plan is Recognition–support from Architecture comes from major research and public service activities of the College's three research centers and five research laboratories connecting practitioners, faculty, and students in a variety of ways:

Per the NJIT Institutional Profile 2021, NJIT Research Institutes, Centers and Laboratories (p. 33): "NJIT is proud of its status as an "R1" Very High Research Activity doctoral institution according to the Carnegie Classification of Institutions of Higher Education. NJIT is one of only three R1 institutions in the state of New Jersey, along with Princeton University and Rutgers University-New Brunswick. The R1 classification is the result of NJIT's growth in research in five transdisciplinary areas: Bioscience and Bioengineering, Data Science and Management, Environment and Sustainability, Material Science and Engineering, and Robotics and Machine Intelligence." Hillier College is actively engaged in research in two of these transdisciplinary areas through its three Centers: 1) Environment and Sustainability (the Center for Community Systems); 2) Material Science and Engineering (the Center for Building Knowledge, or CBK, and the Center for Resilient Design, or CRS). More information about HCAD's Centers, including their missions and example projects, is outlined comprehensively here:

The Architecture programs benefit from their host institution by support for the technology that drives architectural practice in the 21st century (e.g. educational access to Autodesk's Cloud for adjunct instructor Caroline Grieco's ARCH 495 studio this past spring), by geographical proximity to one of the most important building sites in the world and the offices of major practitioners (e.g. Diller Scofidio and KPF are just a few of the offices that scheduled meet and greets with our students this past spring), and by institutional support for the shared values of the 2020 Conditions for Accreditation, specifically Environmental Stewardship and Equity, Diversity, and Inclusion (e.g. NJIT organized the eCLAd 2022 international symposium this past spring).

How individual faculty members participate in university-wide initiatives and the university's academic plan

Many HCAD faculty serve on Standing Committees which report to the Faculty Senate with respect to policies, procedures and recommendations for academic operations. In addition, faculty members serve on University Committees reporting to the President, the Provost and the Vice Provost for Research.

How the program, as a unit develops multidisciplinary relationships and leverages unique opportunities in the institution and the community

A unique relationship exists between the School of Architecture and School of Art and Design– faculty teach across disciplines, studios are interspersed throughout the building, resources are shared (e.g. library, gallery, suite of shops), and the majority of electives are open for cross registration. B.Arch. students can also take courses in Urban Design, Construction Management, Civil Engineering and Business Administration.

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

Program Response:
Honors College and Dean's Scholars
- The Albert Dorman Honors College offers top students a well-rounded education that transforms them into leaders in their fields. (link here)
- The Dean's Scholars programs are academic honors programs housed within NJIT's degree granting colleges, including HCAD. (link here)

Study Abroad & Exchange Programs
- *University of Siena, Italy* The Siena Studio was founded in 1993 by Professor Peter Lang. Under an exchange agreement with the Universitá degli Studi di Siena, one of Europe's oldest and most prestigious universities, students undertake an intensive study of the architecture and urbanism of Italy. Link to further information on Siena Study Abroad here https://design.njit.edu/hcad-study-abroad.
- *Universität Innsbruck, Austria* Exchange program open to students fall or spring semesters.
- NJIT's Office of Global Initiatives is the university's primary resource for international student services and study abroad, as outlined here:

Clubs & Organizations
- The American Institute of Architecture Students chapter (AIAS) is HCAD's largest club. (link here) . A unique aspect of our College is that the NJIT AIAS chapter operates several services that are "by-students, for-students": the Print Room, 3D Lab, and Supply Shop. (see Section 5.6.2 for Student Support Spaces)
- The AIAS Freedom by Design worked consistently through the past school year to design and build a parklet sited in the middle of campus: https://www.aiasnjit.com/freedom-by-design
- ACM SIGGRAPH is a global non-profit, volunteer organization providing year-round programs for the computer graphics community. Architecture students and faculty recently joined Art + Design students and faculty to participate in the Annual SIGGRAPH 2022 Conference https://news.njit.edu/njit-siggraph-2022
- The Domitian Chapter of Alpha Rho Chi (APX) is the national co-ed professional-social fraternity for architecture and the allied arts. Founded in 1914, the fraternity is based on the principle of encouraging leadership, fellowship, networking, and the furtherance of all the professional arts.
- The National Organization of Minority Architecture Students (NOMAS) is a pre-professional group of undergraduate and graduate students who are part of a national network of NOMAS chapters. The NOMAS membership is dedicated to encouraging awareness about the past, present, and future role of minorities in the architecture community. They do so by sponsoring student workshops, by participating in local and national conferences, by speaking at career fairs for local schools, and through their involvement with NJIT's Graduate Student Association.

HCAD's many professional societies and organizations can be found on our Student Club & Organization webpage here: https://design.njit.edu/student-clubs-organizations.

Lecture Series
The annual HCAD lecture series brings nationally and internationally recognized architects, academics, and allied professionals to NJIT to discuss their current work and developments in the professions of architecture and design. The lecture series provides AIA credit. More information can be found on our college Lecture Series webpage here: https://design.njit.edu/lecture-series

Summary Statement of 1 – Context and Mission
This paragraph will be included in the VTR; limit to maximum 250 words.

Program Response:

NJSOA's goal is to produce creative thinkers, competent professionals, and engaged citizens who will meet their ethical responsibilities to the environment and to their society.

We do this in the context of HCAD's mission to prepare students with the skills and knowledge necessary for employment immediately upon graduation, in general and specialty design practices or to pursue research immediately. Across its programs, Hillier College has created and implemented new curricula that address the changing technological and professional demands of the 21st century while continuing to satisfy the requirements for accreditation by the National Architecture Accreditation Board (NAAB), Council on Interior Design Accreditation (CIDA) and National Association of Schools of Art and Design (NASAD.)

HCAD's mission is aligned with that of the university as a whole.

NJIT Mission
NJIT, the state's public polytechnic research university, is committed to excellence and global impact through:
- Education—preparing diverse students to be leaders, professionals, and citizens through innovative curricula, committed faculty, and expansive learning opportunities
- Research—advancing knowledge to address issues of local, national, and global importance emphasizing high impact basic, applied, and transdisciplinary scholarship
- Economic development—anticipating the needs of business, government, and civic organizations to foster growth, innovation, and entrepreneurship
- Engagement—applying our expertise to build partnerships, serve our community, and benefit society

These four elements guide NJIT in contributing solutions for the grand challenges of the future and improving the quality of life today.

2—Shared Values of the Discipline and Profession

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

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

Program Response:

The New Jersey School of Architecture maintains a long-standing commitment to design in its curriculum, research, and core values. Design is also central to all professional degree coursework at the NJSOA. A Curriculum Committee continually fine-tunes the interface between design studios and allied co-requisite courses covering architectural history, integrated building systems, digital design and representation applications. Sustainability is an overarching concern that touches every aspect of coursework. This ongoing assessment lays the groundwork for all long range planning. Extracurricular activities form a culture in which design thrives. The College recognizes design success by encouraging students to compete for awards and by bestowing awards and inclusion in end-of-semester exhibitions.

Opportunities for Students: Curricular
B.Arch & M.Arch
At both the undergraduate and graduate levels, two courses bookend the curricular design experiences at the NJSOA and both have been recently restructured as a result of a long-term assessment process. These are listed below. (To see a comprehensive curricular description of both programs see 3.1-PC.2)

ARCH 110, Arch 555G - Tools and Techniques I: a design thinking course in both first year programs.
ARCH 595, Arch 506G - Advanced Architecture Studio II: These capstone studios each pair with a seminar focused on integrated design solutions, ASHRAE, use of Tally, Insight, etc. **ARCH 561, Arch 547G** (for more detail, see PC.5 and PC.6)

Non-Curricular
HCAD Lecture Series: The 2021-2022 'Design as Research' lecture series featured speakers whose work will provide a lens on what is really meant by the word innovation and transformation, who presented practices that integrate art, science and engineering, human perception, cognition, and experience, the intersection of the digital and physical in architecture, incorporation of the rigorous measurement of environmental impacts into design, and whose insights on the practice as a whole will provide signposts on the pathways we choose to follow. Nina Cooke John opened the spring series with a talk on being a multidisciplinary design practitioner.

Design Showcase See Link and 3.1 - PC.2..

AIAS Firm Tours: See Newsletter and 3.1-PC.2

AIA Newark and Suburban Awards: See 5.2.5 and 3.1-PC.2

Peter Koczarski and ZhongMing Peter Zhang: NJIT architecture students who were awarded first prize in the ACSA 2022 Timber in the City design competition for their project "Pine Hill" led by adjunct instructor Caroline Grieco.

Publications: HCAD faculty maintain a commitment to design issues through publication. See publication list prepared by the HCAD Library's librarian, Maya Gervits here.

Current status and assessment
The NJSOA maintains a multi-tiered framework for the assessment of design's centrality to all its undertakings. (see 3.1 - PC.2 for details)

Long range planning and desired outcomes
A signal outcome of NJSOA assessment has been the recent 2019 Curriculum Restructuring. See a description here. A mid to long range planning goal is to leverage the recent increase in enrollment and expected continuation of this trend to reimagine the design studio from a pedagogical and physical perspective.

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

Program Response:

As part of a top-tier research polytechnic university, the Hillier College is actively engaged in the ethical and rational mission of understanding and improving design's efficacy in reducing negative environmental impacts, at multiple scales. Students in both professional undergraduate and graduate Architecture programs benefit from curricular offerings in the College, a formal interdisciplinary sustainability minor, opportunities to specialize in the topic; and pointed scholarship, research, and symposia focused on the dynamic interplay of natural and built environments. This work, to improve the health, safety, and welfare of individuals and the greater public, is led by both faculty and staff through courses and ongoing activities in multiple established centers and labs.

When the 2020 Conditions added the requirement that students consider the "measurable environmental impacts of their design decisions" the NJSOA reconsidered how we evaluate B.Arch and M. Arch students' abilities to quantify, project-by-project, the ecological effects of their chosen profession. Rather than relying on the indirect methodological measures employed by LEED and other checklist/point-based standards, we have chosen a more rigorous, science-based, approach in keeping with our being embedded in an R-1 polytechnic University. For more detailed information on how this work is carried out please see the description for PC.3 and SC.5 and SC.6 found in section 3.1 Program Criteria in this APR.

By the time all students in both professional programs graduate, they will be introduced to and be required to implement formal environmental life cycle thinking and at least one LCA tool in their design workflow. They will use at least one of the various emerging life cycle assessment powered design tools such as Tally, One Click LCA, Athena, etc. to gain insight into the relative measurable positive benefits of one design alternative over another. These can be measured across a range of environmental impact categories formally defined not by the design professions but scientific experts in climate science, environmental chemistry, and risk assessment. We believe the increased rigor provided by these empirically grounded, data-driven, assessment techniques better position our graduates to provide clear answers to

their clients and the public about how their designs will likely affect the natural world, and ultimately the public's health, safety and welfare.

Opportunities for Students: Curricular

B.Arch
ARCH 196 Architecture Studio II
ARCH 472 – Professional Practice I
ARCH 561 – Synthesis Seminar
ARCH 595 – Advanced Studio II

M.Arch
ARCH 569G – Professional Practice I
ARCH 547G – Synthesis Seminar
ARCH 505G – Advanced Studio II

Non-curricular
Please see PC.3 for description of electives, sustainability minors and concentration, research, lectures, and symposia.

Current status and assessment
The recently implemented curricular changes continue to undergo assessment and refinement but initial review indicates that the approach is sound.

Long range planning and desired outcomes
Architecture and the larger building industry will continue to be a material contributor to climate change. We will continue to operate at the forefront of research and sustainable design education in order to produce graduates who can lead informed discussions on climate action. As standards for demonstrably more ecologically responsive design continue to rise, a long range goal of the Hillier College to increase standards across all design majors and programs.

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

Program Response:

HCAD's diversity is one of its hallmarks, to which a commitment toward equity and inclusion is essential. The promotion of mutual respect across and between its students, teachers, and staff create a nurturing environment for all endeavors at the college, a respect that pervades all aspects of its architecture programs. This is reflected in every interaction and communal activity at the curricular and extra-curricular level.

Opportunities for Students
B.Arch
ARCH 110 Tools and Techniques
ARCH 583-009 Design and Social Identity elective taught by Nidhip Mehta
ARCH 583-011 History and Theory of Urbanism in the Middle East and North Africa elective

AD 490 Mapping Equity by Ana Penalba

M.Arch
ARCH 634 Urban Theory and the Contemporary City elective by Gabrielle Esperdy

Non-curricular
NOMAS: The National Organization of Minority Architecture Students is a pre-professional group of undergraduate and graduate students who are part of a national network of NOMAS chapters. NOMAS is dedicated to encouraging awareness about the past, present, and future role of minorities in the architecture community.

Newark Design Collaborative: This organization features equity prominently in its mission statement along with sustainability (both environmental and social), and prosperity. (See Shared Values: Leadership, Collaboration, and Community Engagement)

AIAS: This organization and its affiliated Freedom by Design program is also to "empower our members and students as a whole to be good citizens on their campuses and in their communities." See 3.1 - PC.8.

Lecture Series: Design as Research Lecture Series 2021-2022 - Seven of the ten speakers were women, five of whom were non-white.

Learning Teaching Culture Policy: This recently completed document is focused on inclusivity. See 3.1 - PC.7.

AIAS Firm Tours: These Firm "Meet and Greets" for students with architecture firms at their invitation with regard to Equity, Diversity, and Inclusion initiatives including KPF, Cannon, Diller Scofidio Renfro this past academic year. See 3.1 - PC.2.

High School Programs: Current development of a high school program with the Orange Board of Education, a local public school with 100% minority enrollment. The effort will develop a 9th –12th grade high school program, with first year architecture courses taught for credit in 11th and 12th grade as well as the summer after 12th grade. Students will be providing advanced standing to students to pursue an NJIT architecture or design degree.

Alumni: Evidence of leadership in Equity, Diversity, and Inclusion is recognized in the accomplishments of our alumni:

Mohamed Elshahed '05: This NJIT alumnus is a writer, critic and architectural historian focusing on modernism in Egypt and the Arab World. His recent book *Cairo Since 1900 – An Architectural Guide* was the subject of a recent exhibition at the New York Center for Architecture in spring 2022. He also spoke about his book at the Littman Library, more information is here:

Bryan Lee '08 and his firm Colloqate was named the 2021 Cooper Hewitt Emerging Designer of the year. In his keynote lecture during the Hillier College 2020 Design Showcase, Lee describes how, through the process and outcomes of design, designers can get to Design Justice. As Lee said in an interview with Terri Peters of Architect's Magazine, "Design justice is a foundational principle; it is not a design process, yet. It is an underlying framework for how to think about getting to the architecture. The principal argument of design justice is that we are creating spaces of racial, social, and cultural justice through the process and outcomes of design. Complementing that notion is that design justice seeks to challenge the privilege and power structures that use architecture as a tool of oppression. It is people- and justice-focused. It seeks to create radical visions for what living in space with one another means. In the next five to 10 years, we'll start to see the aesthetic correlation between design

justice and what we call colloquial architecture—just like you saw the change in the aesthetics of place as a byproduct of the environmental movement 20 to 30 years ago."

Brian Tibbs '91 was recently named the managing partner at Moody Nolan, the largest African-American architecture firm in the United States and recognized by AIA as the 2021 Firm of the Year, its highest honor for an architecture office. At Moody Nolan, regular discussions are held amongst colleagues to talk about the hard issues: systemic racism, the lasting effects of segregation, stereotypes, racial covenants and redlining, gentrification, police and policing, mass incarceration and privilege. Bryan remarked, "Diversity is not what we do, it is who we are."

Long range planning and desired outcomes
To further HCAD's commitment to equity and inclusion in plans to promote its Orange High School recruitment arrangement and restart a similar opportunity with a Newark Architecture and Design High School. The NJSOA will also advance discussion of using Integrated Path to Architecture Licensure (IPAL) as a way to break down barriers to the profession.

Knowledge and Innovation: Architects create and disseminate knowledge focused on design and the built environment in response to ever-changing conditions. New knowledge advances architecture as a cultural force, drives innovation, and prompts the continuous improvement of the discipline.

Program Response:

Opportunities for Students: Curricular
B.Arch
ARCH 463/464: Options Research Studios focused on research and innovation. Examples include:
● Andrzej Zarzycki Robotics studio
● ARCH 491 Independent Study (1 credit) and ARCH 493 Independent Study (3 credit)
● Electives offered by the School of Art and Design programs

M.Arch
ARCH 626 Building Dynamics elective taught by Vera Parlac
ARCH 689 AI/VR in Architecture elective taught by Taro Narahara
ARCH 677 Geographic Information Systems taught by Cody Calvin
ARCH 622 Life Cycle Assessment and Design

Graduate electives offered by the School of Art and Design programs:
DD UI/UX in Digital Design
DD 634 Physical Computing for Design - Interaction Design

Non-Curricular
eLCAd Symposia - NJIT organized the international eLCAd 2021 and eLCAd 2022 virtual symposia. Designers, along with experts in life cycle assessment (LCA), convene to explore the tools of environmental LCA in design (eLCAd). Students and faculty were invited to participate, with faculty sponsorship by HCAD. NJIT students attended for free. Co-chaired by Associate Dean, John Cays.

Current Status and Assessment

Since the last accreditation, NJSOAhas maintained a robust level of leadership through publications (link here) and in pursuing grant funding research awards (link here).

Several faculty maintain award winning design firms:

Maria Hurtado de Mendoza: Estudio Estresito
Georgine Theodore, Interboro Partners

Long range planning and desired outcomes
HCAD maintains long range plans to pursue two of its primary types of research. Work through the Newark Design Collaborative represents the first. The NDC will focus on social impact and the involvement of architects in community development and planning work. This community engagement demonstrates the power of design and urban planning to improve quality of life for the public at large.

The college's second research goal is to continue to pursue long range plans advancing technologies, systems, and materials of the built environment, with a special focus on both sustainability and emergent technologies for robotics and artificial intelligence.

It will do so through its Research Centers and laboratories, continuing to include students in research. It will also continue to support faculty pursuing grants and patents.

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

Program Response:

A collaborative spirit pervades the culture of NJSOA and the ability to collaborate necessitates leadership. This spirit transcends the curriculum in activities that seek diversity, inclusion and empathy in activities initiated by students, faculty, and administrators alike. Faculty research and community engagement through organizations such as the Newark Design Collaborative will set the tenor for future engagement.

Opportunities for Students: Curricular
B.Arch
ARCH 463/464 Options Studios include design/build studios, studios in partnership with external organizations, and studios with community engagement. Examples include:

Newark Community Museum Unveiled With Help From NJIT
https://news.njit.edu/newark-community-museum-unveiled-help-njit

POD Place of Dwelling won the Core 77 Design Awards 2022 "Student Runner Up Built Environment Award" and "Community Choice" award
https://designawards.core77.com/Built-Environment/112051/POD-PLACE-OF-DWELLING

NJIT Students Design and Build Home to Address Newark's Housing Crisis
https://news.njit.edu/njit-students-design-built-home-address-newarks-housing-crisis

M.Arch
ARCH 679 Envisioning Newark electives

Non-Curricular
Albert Dorman Honors College & Deans Scholars, first year Honors courses (link here)

AIAS (link here) and AIAS Freedom by Design (link here)

Career Development Services Civic Engagement Activities
Our community service work follows five problem-based focus areas and NJIT civic engagement programs advance civic learning and democratic engagement by cultivating our campus environment, and individual and collective capacities. Those areas include:

Disaster Services
We engage our students in concerns regarding the preparation, response, and recovery through volunteer efforts that relate to disaster events from Superstorm Sandy to the latest Hurricane IDA.
Programs/Services
● NJIT Alternative Spring Break; emphasizing rebuilding and beautification (began in HCAD in 2013 as a response to SuperStorm Sandy)
● First Year Service Day
● NJIT Community of Caring Volunteers

Economic Opportunity
We engage our students in programs which address unmet needs of economically disadvantaged individuals and the agencies that serve them. This includes financial literacy, affordable housing, employment related assistance, and capacity-building assistance for non-profit organizations and small business
Programs/Services
● Community Service Work-Study – (non-profits)
● Federal Work Study Experimental Sites (small businesses)
● Civic Engagement Computer Center @ NJIT- (Sites)
● NJIT Service Learning Program
● Proposing a Service Learning at Shabazz High School - Entrepreneurial Program

Education
We engage our students in services related to unmet educational needs within communities, especially those that help at-risk youth to achieve success in school and prevent them from dropping out. Volunteers and community service work-study students will provide tutoring, mentoring, and small group instruction, primarily in the STEM disciplines, to economically disadvantaged K-12 students with the goals of increasing graduation rates, improving literacy skills, and enhancing college-readiness.
Programs/Services
● America Learns – (Sites)
● Mentoring @ NJIT with Big Brothers Big Sisters – (Sites)
● Coding Institute – Real World Connections

Environmental Stewardship
We engage our students in programs to address local energy and water efficiency, renewable energy use, at-risk urban ecosystems, and behavioral change leading to increased efficiency in conservation.
Programs/Services
● Environmental Stewardship Community Service – (Sites)
● Greater Newark Conservancy, Urban Farms, International Youth Organization
● Newark Beautification Initiative – (Sites) a partnership with Newark and HCAD
● Civic Engagement support of student groups, i.e., Engineers without Borders

Healthy Futures
We will engage our students in programs addressing issues of access to healthy food sources for households;homelessness; unmet health needs, including access to health care

and healthcare technology; increasing physical activity;improving nutrition in youth; and personal and youth development.
Programs/Services

● Goodwill Rescue Mission, Civic Engagement support of on-campus Food Pantry
● Civic Engagement support of student group-sponsored food drives, volunteers at local shelters, etc. – (Sites)
● Digitizing health records for client and patient convenience – (Sites)
● Civic Engagement support of student groups, i.e., NJIT Chapter Global Brigade

Community Service Webpages:
https://www.njit.edu/ careerservices/community-service
https://www.njit.edu/ careerservices/alternative-spring-break

Current Status and Assessment
Evidence of "Leadership" is in recognition of our accomplishments:

Faculty Teaching
Our faculty continue to be recognized for their academic excellence. Rima Taher was named the 2021 Educator of the Year by ASCE New Jersey. At the recent NJIT Convocation Ceremony, Georgeen Theodore was honored with the Excellence in Teaching Award, Tony Schuman as Master Teacher, and Gabrielle Esperdy with the Overseers Excellence in Research Prize and Medal. Esther Zipori received the Excellence in Teaching Award as Teaching Assistant. This year Darius Sollohub received the The Van Houten Award for Excellence in Teaching from the NJIT Alumni Association. John Cays was Internationally recognized by the American Center for Life Cycle Assessment with the 2021 "Education LCA Leadership Award" for integrating LCA into the design practices of architecture students, interior design students, and industrial design students.

Faculty Research
The faculty are addressing a variety of contemporary issues in their research, scholarly and creative work. Maya Gervits, Monica Kenzie and Hannah Kum-Biocca are working on the integration of AR with the Digital Archive of Newark Architecture (DANA), redefining how it is accessed. Assistant Professor Mat Schwartz and his collaborators have completed the humanoid robot named TOCABI (TOrque Controlled compliAnt BIped). Deane Evans, Associate Dean for Research, who has recently been awarded the prestigious AIA UpJohn Research Initiative Grant, Georgeen Theodore and her students, featured in the article by Archinect, whose work on improving Newark's Federal Campus has earned high praise from the regional leaders at the General Services Administration. See list of publications here.

Faculty and Student Community Engagement
The Newark Design Collaborative (NDC) is a newly formed entity affiliated with the Hillier College of Architecture and Design that seeks to triangulate the expertise and experience of NJIT faculty, a wide range of Newark community stakeholders, and student participants. The collaborative is still in its formative stage. In 2019, with support from the HCAD administration, NJIT Professors Anthony Schuman, Darius Sollohub, and Georgeen Theodore sought to create an umbrella organization for Newark-focused academic initiatives, formalizing an ad-hoc arrangement that had been nonetheless an essential part of the school since its founding in 1973.

Receiving a seed grant to support a student research team studying university-based design centers across the U.S, the faculty and students presented their findings in late 2021 to a meeting of Newark stakeholders, who indicated strong support for an NDC based on the precedents presented. As of this writing, the student team is completing the profiles of school-based programs presented at the meeting. These will be subsequently circulated to all ACSA schools through presentations and publication.

The faculty group ultimately seeks to realize a longtime goal: the creation of a downtown facility to host collaborations, provide a neighborhood meeting place, and support academic studios. This would be a space for design, planning, presentations, exhibitions, discussions, and debate over development practice, theory, and engagement in Newark. It would also be home to the many urban scaled models produced by the school, as well as a base for its re-invigorated design-build operation.

The NDC will assist in efforts to plan and design for a more equitable, sustainable, and prosperous Newark. Its pedagogical mission will continue its past trajectory: to educate future designers and planners by providing them with a rich learning experience through direct engagement with the Newark community in design and planning processes. It will continue to engage city government, community groups, nonprofits, planning agencies, and the private sector, operating at a variety of scales including building design, neighborhood design, urban design, and infrastructure. To accomplish its goals, the NDC will work with other entities to maintain a database of city documents, GIS maps, digital models, and other products to support design studios, seminar classes, independent projects, reports, and all forms of community engagement. This resource will be open to all. See Link.

Alumni Community Engagement
DENSE is a new magazine launched by a group of mostly NJIT alumni including co-founder Petia Morozov, a practicing architect who graduated NJIT in 1991 and Gretchen Von Koenig, an editor and NJIT alumni, among many others. The magazine's subject matter is unconventional; it leans into the complexity of the state of New Jersey, mirroring the real-world conversations around designing for environmental equity and social justice. More about the magazine here: https://news.njit.edu/dense-magazine-launched-njit-alumni

Additional alumni accomplishments are noted above in the section on Equity, Diversity and Inclusion.

Long range planning and desired outcomes
HCAD will resume its Strategic Plan to maintain focus on long range planning to continuously improve learning outcomes and student success through curricular development. It will do so by locating the Newark Design Collaborative in a high profile downtown Newark location to support HCAD's community interactions and develop connections with high schools in Newark and nearby communities to serve a more student body diversity. The College will embrace its 50th Anniversary celebration to assess its impact as it prepares for the next half century of educating architecture and design students.

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

Program Response:
Since its formation in 1973 at the behest of the local chapter of the AIA, the NJSOA has maintained strong connection with the organization that helped it and with the broader group of professions that it interfaces with as well as the community it serves. Since the last accreditation it has expanded its alumni base and often seeks its counsel. It provides continuing education in the form of certificates and credits for programs it sponsors and lectures it hosts. The doors to Weston Hall are always open to our communities, whether to use our library, attend our events, or interact with our students.

Opportunities for Students: Curricular

B.Arch
ARCH 210 History of Architecture I
ARCH 211 History of Architecture II
ARCH 324 Landscape and Urbanism taught by Tom Navin
Two required upper-level history/theory electives

M.Arch
ARCH 528G History of Architecture I
ARCH 529G History of Architecture II
ARCH 549G Landscape and Urbanism taught by Tom Navin
ARCH 684 Topics in Sustainable Urbanism elective

Non-Curricular
HCAD Lecture Series
HCAD Gallery Exhibitions & Events https://design.njit.edu/news/galleries
Design Showcase Exhibition of student and alumni work

Opportunities for Alumni
All alumni have access to the Van Houten Library and Littman Library. Borrowing privileges are outlined here: https://library.njit.edu/services/alumni/borrowing.php

Alumni also have access to Career Development Services (CDS).

Professional Development
NJIT Non-degree Studies To learn more about a topic for professional development, it's possible to take up to 15 undergraduate and 9 graduate credits as a visiting student without officially applying for entrance to a program of study.
Visiting and Non-Matriculated Students Summer and winter session courses are available.

Graduate Certificates
School of Art & Design online certificates https://design.njit.edu/school-art-design
      UI/UX Digital Design Essentials
      Digital Arts Essentials
      Animation Essentials
      Game Design and Interactivity Essentials
Architecture Graduate certificates https://design.njit.edu/graduate-certificates-architecture
      Sustainable Building Design
      Digitally Augmented Architecture
      Sustainable Cities and Urban Ecologies
      Real Estate Design and Development

Lecture Series provides AIA credit.

Current status and assessment
As described already in Value descriptions above, the Newark Design Collaborative currently planned will promote a more equitable, sustainable, and prosperous Newark by engaging city government, community groups, nonprofits, planning agencies, and the private sector to operate at a variety of scales, including building design, neighborhood design, urban design, and infrastructure. It will serve to support and educate other organizations by maintaining a database of city documents, GIS maps, digital models, and other products as a resource open to all. The NDC will provide a co-working environment to several cohorts: one, the many organizations working in Newark who already collaborate with the NDC, such as the AIA, Habitat for Humanity, and the Regional Plan Association. It will include the many Trenton, New Jersey based organizations, such as New Jersey Future and Downtown New Jersey,

who would welcome a satellite location in a northern New Jersey city. A second cohort would be for Newark-region start-up design firms. See Link.

Long range planning and desired outcomes
The NJSOA will use its restored strength from increased enrollment to expand its impact into multiple communities in New Jersey. It will also use its new administrative structure to expand its scope, and with a new dean, celebrate its 50th birthday. This also provides an opportunity to assess the college's impact as it sets long range plans for the next half century.

3—Program and Student Criteria

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

3.1 Program Criteria (PC)

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

The NJSOA offers two professional degree curricula, the undergraduate B. Arch, and the graduate M. Arch. These curricula share a single faculty and a common overall approach to architectural education: to cultivate students who are professionally ready, technically savvy, and socially responsible. Both degree programs share common features including a series of and overseas programs. An examination of each program reveals how each of the eight criteria of this section are woven into the curricula.

Bachelor of Architecture [Link]
The undergraduate professional degree is a five-year Bachelor of Architecture (B. Arch). The goal of the undergraduate curriculum is to prepare students according to the NJSOA's pedagogical objectives: to be leading design professionals, to maintain technological prowess, and to practice in a socially responsible manner. Meeting these goals prepares them to benefit fully from the Architectural Experience Program (AXP) and to achieve licensure through the ARE. The curriculum consists of two tiers: (1) an initial three-year core program that provides the requisite skills and knowledge fundamental to more advanced study (2) a two-year advanced curriculum in which students take professional preparatory courses and can both choose from special topics studios and electives. The undergraduate curriculum culminates in a three-course grouping where students must demonstrate comprehensive design abilities. The education of a student consists of imparting knowledge, skills, and attitudes. These become the determining factors for how our graduates see their relationship between the profession and society.

Master of Architecture [Link]
The accredited professional graduate degree program is the Master of Architecture (M.Arch.). This program is conceived and organized as an accelerated, condensed immersion in architecture that covers in six semesters in what undergraduates cover in ten. This condensation is possible because virtually all students admitted to the program have fulfilled general education requirements in their undergraduate studies and can concentrate almost exclusively on the professional curriculum. The graduate program is enriched by the diverse educational backgrounds of our entering students, many of which did their undergraduate degrees in fields outside architecture or outside the United States.

After an initial preamble, each response in this section follows a common structure. Where the B.Arch and the M.Arch are similar, responses refer to both. Where responses are unique to a program, those are separated. Each criteria includes the following headings:

Curricular Experiences
This section describes the specific courses or common qualities of multiple courses that include the experiences. It also includes how non-professional curricula can provide experiences.

Extracurricular Experiences
At the NJSOA experiences not directly tied to coursework play a critical role in providing the experiences of a given criteria.

Assessment, Outcome, and Opportunity
Each criteria description ends with criteria-specific assessments and outcomes, and opportunities sought through long term planning.

Continual assessment is embedded at every level within the culture of NJIT. Within the NJSOA, several features are common to all assessments: the Curriculum Committee, an archival system named Kepler, and NJIT course evaluations. Because of the importance of each, this report introduces them here below and provides references and links to comprehensive descriptions elsewhere. And because the outcomes of the NJSOA's 2019 Curricular Restructuring is equally ubiquitous, it is introduced in a similar manner.

Curriculum Committee This group plays an outsize role in addressing the relevant pedagogical issues involved in meeting NAAB criteria. See section 5.3.2 for a complete description of NJSOA assessment practices including the Curriculum Committee's charge and makeup. The committee is an essential clearing house for addressing short needs and long term planning.

Course Evaluations: NJIT maintains a course evaluation system accessed via an online portal for every NJSOA course. It consists of 11 ratings questions and 3 open-ended comment questions. While these primarily assess faculty performance for administrative purposes, the evaluations also offer valuable feedback for educators on how they can improve the courses governed by all the criteria of this section.

Kepler: is an Online Student Assessment system where all student work is stored. Kepler's use is ubiquitous throughout each crieria's assessments made in this section. Because of this, its description is given as a link so the team can access Kepler's description throughout the report. Access description of Kepler here.

Curricular Restructuring: From 2017 to 2019 the NJSOA underwent significant curricular restructuring at both the undergraduate and graduate levels. Given this overarching change, the restructuring is described in a separate document so reviewers can access it through the report. Access Curricular Restructuring description here.

NJIT SCHOOL OF ARCHITECTURE B.ARCH DEGREE

NJIT NAAB 2020 Matrix Draft 1.0
10.13.2021

Key: Required Documentation

- Support. Materials
- Narrative + Self Assess. + Support. Materials
- Narrative + Self Assess. + Support. Materials
- + Student Work
- * For the convenience of the team please first look for PC and SC evidence in the course documents from the course marked with the star

Shared Values

1. Design
2. Env. Stewardship & Professional Resp.
3. Equity, Diversity & Inclusion
4. Knowledge & Innovation
5. Leadership, Collab. & Community Engmt.
6. Lifelong Learning

Program Criteria

- PC.1 Career Paths
- PC.2 Design
- PC.3 Ecological Know. & Respon.
- PC.4 History & Theory
- PC.5 Research & Innovation
- PC.6 Leadership & Collaboration
- PC.7 Learning & Teaching Culture
- PC.8 Social Equity & Inclusion

Student Criteria

- SC.1 HSW in the Built Environ.
- SC.2 Professional Practice
- SC.3 Regulatory Context
- SC.4 Technical Knowledge
- SC.5 Design Synthesis
- SC.6 Building Integration

Curriculum matrix — Preparatory Education; Foundation (1st Year, 2nd Year); Integration & Options (3rd Year, 4th Year, 5th Year); Non-Curricular Activity.

1st Year Fall: ARCH 195 Architecture Studio I; ARCH 110 Tools and Techniques I; HUM 101 English Composition; CS 104 Computer Program. & Graphic Problems; MATH 102 University Mathematics; FRSH SEM Freshman Seminar
1st Year Spring: ARCH 196 Architecture Studio II; ARCH 156 Tools and Techniques II; HUM 102 English Composition; MATH 105 Elementary Probability and Statistics; Elect Social Science Literacy

2nd Year Fall: ARCH 295 Architecture Studio III; ARCH 210 History of Architecture I; ARCH 223 Construction I; PHYS 102 Physics I; PHYS 102A Physics I Lab
2nd Year Spring: ARCH 296 Architecture Studio IV; ARCH 211 History of Architecture II; ARCH 224 Construction II; Elect Scientific Literacy; Elect History and Humanities 2XX

3rd Year Fall: ARCH 395 Architecture Studio V; ARCH 303 Structures I; ARCH 309 Environmental Control Systems I; ARCH 324 Landscape and Urbanism; Elect History and Humanities 3XX
3rd Year Spring: ARCH 396 Architecture Studio VI; ARCH 304 Structures II; ARCH 314 Environmental Control Systems II; Arch Elect; Elect History and Humanities 3XX

4th Year Fall: ARCH 495 Advanced Architecture Studio I; ARCH 472 Professional Practice I; Technology Arch Elect; Senior Seminar Elect
4th Year Spring: ARCH 463 Options Studio I; ARCH 475 Professional Practice II; Technology Arch Elect; Arch Elect

5th Year Fall: ARCH 595 Advanced Architecture Studio II; ARCH 561 Synthesis Seminar; History/Theory Arch Elect; Arch Elect
5th Year Spring: ARCH 464 Options Studio II; History/Theory Arch Elect; Arch Elect; Arch Elect

Non-Curricular Activity: Lecture Series; Superjury; Example: Student Recycling Committee; Example: Day of Service; Activity Name; Activity Name; Activity Name

NJIT SCHOOL OF ARCHITECTURE M ARCH DEGREE

NJIT NAAB 2020 Matrix Draft 1.0
10.13.2021

Key   Required Documentation

Support Materials
Narrative + Self Assess. + Support. Materials
Narrative + Self Assess. + Support. Materials
+ Student Work

For the convenience of the team please first look for PC and SC evidence in the course documents from the course marked with the star

*

1 Design
2 Env. Stewardship & Professional Resp.
3 Equity, Diversity & Inclusion
4 Knowledge & Innovation
5 Leadership, Collab. & Community Engmt.
6 Lifelong Learning

Program Criteria

PC.1 Career Paths
PC.2 Design
PC.3 Ecological Know. & Respon.
PC.4 History & Theory
PC.5 Research & Innovation
PC.6 Leadership & Collaboration
PC.7 Learning & Teaching Culture
PC.8 Social Equity & Inclusion

Student Criteria

SC.1 HSW in the Built Environ.
SC.2 Professional Practice
SC.3 Regulatory Context
SC.4 Technical Knowledge
SC.5 Design Synthesis
SC.6 Building Integration

Preparatory Education

Foundation

1st Year

Fall
ARCH 501G Architecture Studio I
ARCH 555G Tools and Techniques I
ARCH 528G History of Architecture I
ARCH 541G Construction I

Spring
ARCH 502G Architecture Studio II
ARCH 500G Tools and Techniques II
ARCH 529G History of Architecture II
ARCH 542G Construction II

2nd Year

Fall
ARCH 503G Architecture Studio III
ARCH 545G Structures I
ARCH 543G Environmental Control Systems I
ARCH 519G Landscape and Urbanism

Spring
ARCH 295504G Architecture Studio IV
ARCH 548G Structures II
ARCH 544G Environmental Control Systems II
Arch Elect

Integration

3rd Year

Fall
ARCH 505G Advanced Architecture Studio I
ARCH 549G Professional Practice I
Arch Elect

Spring
ARCH 506G Advanced Architecture Studio II
ARCH 579G Professional Practice II
ARCH 547G Synthesis Seminar
Arch Elect

Non-Curricular Activity

Lecture Series
Superjury
Example: Student Recycling Committee
Example: Day of Service
Activity Name
Activity Name
Activity Name

NJSoA Course Alignments & 2021–22 Teaching Assignments
5/3/2022

COURSE NAME			B.ARCH COURSES					M.ARCH COURSES	
			UG	F/T Instructor				GRAD	F/T Instructor
Architecture Studio I	Foundation	1st Year / Fall	195	Tom Ogorzalek		Foundation	1st Year / Fall	N/A	N/A
Tools & Techniques I			110	Gabrielle Esperdy				555G	*Benjy Akhavan*
Architecture Studio II		1st Year / Spr	196	Tom Ogorzalek			1st Year / Spr	N/A	N/A
Tools & Techniques II			156	*John Cunningham*				500G	*Brandon Warshofsky*
Architecture Studio III		2nd Year / Fall	295	Gernot Riether			1st Year / Fall	501G	Steve Zdepski
History of Architecture I			210	Gabrielle Esperdy				528G	Gabrielle Esperdy
Construction I			223	Mark Bess				541G	Mark Bess
Architecture Studio IV		2nd Year / Spr	296	Julio Garcia Figueroa			1st Year / Spr	502G	*Carrie Gibbs*
History of Architecture II			211	Gabrielle Esperdy				529G	Cleve Harp
Construction II			224	Julio Garcia Figueroa				542G	Julio Garcia Figueroa
Architecture Studio V		3rd Year / Fall	395	Vera Parlac			2nd Year / Fall	503G	*Khoi Nguyen*
Structures I			303	Rima Taher				545G	Rima Taher
Envir. Control Systems I			309	Hyojin Kim				543G	Hyojin Kim
Landscape & Urbanism			324	*Jennifer Bolstad*				549G	*Jennifer Bolstad*
Architecture Studio VI		3rd Year / Spr	396	Vera Parlac			2nd Year / Spr	504G	Kelly Hutzell
Structures II			304	Rima Taher				548G	Rima Taher
Envir. Control Systems II			314	Hyojin Kim				544G	*Han Yan*
Adv. Arch. Studio I	Integration & Options	4th Year / Fall	495	*Caroline Grieco*		Integration	3rd Year / Fall	505G	*Caroline Grieco*
Professional Practice I			472	Darius Sollohub				569G	Darius Sollohub
Options Studio I		4th Year / Spr	463	Gernot Riether			3rd Year / Spr	N/A	N/A
Professional Practice II			475	Mark Bess				579G	Mark Bess
Adv. Arch. Studio II		5th Year	595	Darius Sollohub				506G	Steve Zdepski
Synthesis Seminar			561	Andrzej Zarzycki				547G	*Erin Heidelberger*
Options Studio II			464	Gernot Riether				N/A	N/A

italics = adjunct faculty

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

Program Response:

B.Arch Program & M.Arch Program
Students in both the bachelors and masters level programs at the NJSOA have exposure to a wide array of professionals, both within and beyond architecture, who offer examples of career paths. The NJSOA location, within one of the world's largest service markets, provides access to the broadest range of licensed architecture professionals. These include firms specializing in building types or construction methods, consultants involved with cost or performance, specialists in specification or sustainability, and those on the frontier of the profession's advances in communication, fabrication, and applied science. This exposure offers a full spectrum of how architects can practice. The NJSOA's proximity also provides access to other professionals who parallel those of the architect in both the built environment and the social framework of society. These include those in the planning, programming, construction, and financing of architecture, as well as those individuals who give voice to communities to ensure representation and equity. This inquiry places no limitations on scale: NJSOA students can rub shoulders with experts ranging from the nano scale to that of regional policy planning. Close relations with our sister school gives students exposure to the professional worlds of interior design, industrial design, and a broad range of digital professionals from game designers to those involved with augmented and virtual reality. Nesting within a large R-1 polytechnic allows the NJSOA connectivity to engineering, management, computing, and science professionals. A newfound emphasis on entrepreneurship at NJIT accelerates all these exposures.

Curricular Experiences
Both the B.Arch and M.Arch curricula at the NJSOA maintain roughly equivalent exposures to this variety of career paths both within and outside the architectural profession. These commonalities are listed below. According to NJIT policy, graduate courses require advanced experiences over undergraduate courses, even though they deliver similar course content.

Professional Practice I ARCH 472 (undergrad) and ARCH 569G (grad) covers all aspects of architectural programming and examines the full scope of project development that precedes and follows the programming phase. The courses identify major stakeholders in the building design and production process and examine their roles. Lectures and assignments include user requirements and client values, methods of pro forma analysis for project development and approval, and how the programming and development process are both changing because of digital technology.

Professional Practice I ARCH 475 (undergrad) and ARCH 579G (grad) courses serve as a forum for examining the structure and practices of the profession of architecture. These include the formal and informal relationships between architects, and between architects and clients, government officials, and consultants. Basic principles of office management for the small and large architectural firms are introduced.

In studio courses, the NJSOA has a long tradition of outwardly focused studios that allow interaction with stakeholders. Proximity to many large and small firms–a subway ride away–also allows for a wide rotation of critics to come to reviews, adding another exposure to architects and other career professionals. Within the current Academic Year, the undergraduate third-year studios focus on an urban site in an informal collaboration with the

New Jersey Performing Arts Center and their development team. The fall semester focuses on housing and the spring on a theater. The graduate program follows a similar structure in the second year with a spring semester focusing on housing and urbanism.

B.Arch only: The Bachelor of Science (B.S.Arch) degree path is a viable, attractive alternative career path by the NJSOA and specifically its advisors. This degree option provides specialization in one of three categories: (1) sustainability; (2) fabrication/ computation; and (3) urbanism. The degree also allows a broader array of career options in the design field and supports the HCAD's position within the university by maintaining positive retention numbers to meet university goals and also argue for appropriate resources.

B.Arch only: Undergraduates may earn a Minor in Environmental Studies and Sustainability (ESS) as well as s for in Management, Civil Engineering, and Urban Design. See section 4.2.3 for details.

M..Arch only: The Master of Science in Architecture (M.S. Arch.) is designed for students who wish to specialize in career paths such as sustainability, urbanism or computation as a step toward study at the doctoral level, attaining a necessary terminal degree for university-level teaching, or entering employment positions in government at a higher payscale.

M..Arch only: Graduates may earn a Dual Degrees in Management, Civil Engineering, and Urban Design and as well as School of Art and Design Online Certificate programs in Animation Essentials, Game Design and Interactivity Essentials, UI/UX Digital Design Essentials and Digital Arts Essentials. See section 4.2.3 for details.

Extracurricular Experiences
The following experiences are available to both B.Arch & M.Arch students:

Architect Licensing Advisor: The NJSOA has designated University Lecturer Mark Bess, AIA, NOMA, NCARB to be the School's Architect Licensing Advisor for NCARB and its AXP program. In his role as the Architect Licensing Advisor, he has developed on-going seminar sessions for the student body introducing the path towards licensure and the AXP program, ARE, and NCARB certification. The NJSOA supplements these sessions by engagement with student run organizations including AIAS and NOMAS as well as representatives from NCARB. See more information in Section 5.4.2.

Integrated Path to Licensure: The NJSOA is actively involved in establishing an IPAL (Integrated Path to Licensure) program. In addition to promoting professionalism, it is the school's belief that as an IPAL institution it can actively offer students the opportunity to participate in architectural office culture and experience the ARE. Additionally, IPAL involvement compels NJSOA to broaden its work-study offerings and develop facilities for test preparation. Currently the NJSOA is finalizing the IPAL application, contacting local architectural firms as working partners, and developing its IPAL curriculum to allow for office AXP experience and a first-class option for future students. NJSOA is anticipating submission of its IPAL application during the fall 2022 semester.

Construction Documents Technology (CDT) Prep Course: NJSOA is engaged with the NJ local CSI Chapter to introduce a CDT (Construction Documents Technology) prep course to our students. CDT is a designation that one obtains after successful completion of CSI's CDT examination. The prep course is designed to inform students about the process, roles & responsibilities of parties in the industry as well as project delivery methods and related contract documents. As a result, the course serves two functions. While reinforcing topics that appear on at least two sections of the ARE, it also prepares students for taking the CDT exam, which when completed demonstrates a degree of expertise and professional

commitment to future employers. HCAD believes that by adding this prep course, perhaps as part of a professional practice elective offering, we can simultaneously deliver a conceptual understanding of the construction process and positively impact ARE test outcomes for our students.

AIAS Firm Tours give students a firsthand glimpse of what life is like in the architecture profession. See Newsletter.

Career Development Services (CDS) assists both NJIT students and NJIT alumni with career guidance. See Section 5.4.4 for more information about CDS.

Assessment, Outcome, and Opportunity
Faculty self-assessment and student evaluation of each course occur at the end of the semester. These are then reviewed by the school director and others. The NJSOA Curriculum Committee plays a central role in assessing how professional requirements for specific professional degree paths are met in the curriculum. Kepler plays an essential role in this evaluation in both evaluating the quality of work and determining whether standards have been met. The committee reviews course sequences at the end of each academic year to assess whether they met the NAAB Matrices. These annual assessments become both evidence and building blocks for long range planning. An outcome of the 2019 Curricular Restructuring (see link) reorganized the undergraduate and graduate professional practice courses so they would be offered earlier in the curriculum so that knowledge accrued could better influence studio work. This is especially impactful for the Advance Studio sequences. Course content did not change.

HCAD Dean's Advisory Board, made up of leaders, practitioners, and experts in the design, construction, and real estate fields, this group periodically counsels and assesses how to best maintain the kind of education programs that appropriately anticipate the needs of the profession, industry, and society. This counsel is both formally and informally transmitted to the faculty and influences how the curriculum best exposes students to a variety of existing and emergent career paths. The advisory board is a critical player in guiding HCAD's long term planning. See Link.

Regular communication between HCAD's two schools allows for a rich interaction between the variety of design fields both schools offer. Typically, long term planning at HCAD is college wide.

Opportunities in this section include taking better advantage of the school's proximity to the large labor market of design professionals in the NY/NJ region. This advantage can aid in further diversifying HCAD instructors. It also provides an opportunity to hire instructors in the NJIT category of Professor of Practice. Advancing IPAL will further attract graduates toward a career path in architecture.

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

Program Response:

Design is central to all professional degree coursework at the NJSOA. The school continually fine-tunes the interface between design studios and allied co-requisite courses covering architectural history, integrated building systems, digital design and representation applications. Sustainability is an overarching concern that touches every aspect of coursework. A Curriculum Committee continually monitors the introduction of design topics

so as to ensure a wide range of types and scales of exploration as well as the effectiveness of instruction. Success in these endeavors is recognized by bestowing awards and inclusion in end-of-semester exhibitions.

Curricular Experiences
B.Arch: An undergraduate design pedagogy at the NJSOA begins with a three-year core structure, followed by a two-year options and capstone period. The core begins with foundational design and representation courses followed by studios gradually increasing in complexity accompanied by history and technical allied courses. The last two years allow for students to explore various options while also satisfying the NAAB design synthesis and integration requirements within a three-course capstone combination.

First Year studios begin elementally by linking four exercises involving architecture language—wall, aperture, surface, and volume—within an iterative process of making. The studio uses these interrelated exercises to introduce a range of architectural issues and establish an ability to visualize, communicate, and execute work. The exercises are structured to help students understand architectural abstraction through orders of magnitude. The second semester continues the four-part sequence engaging material and ordering systems, structure, movement, and public and private space. First year studios parallel a Tools and Techniques sequence that develops skills of communication, organization, and critical thinking, specializing those introduced in NJIT first-year writing courses. A spring semester of this course deploys the analog and digital methods available to communicate design intent through drawing.

Second Year engages the complexity of different programs, site parameters, and constraints of building systems, synthesizing all within a coherent whole. The year introduces students to clients, city officials, and other entities allowing for a comprehension of architecture's social, cultural, technological, and ecological dimensions. These are blended with the discipline's traditions and discourses in terms of history, theory, and criticism, as well as the relationship to other disciplines, including art, design, and the humanities. A spring studio continues to examine technological, social, and environmental issues in the context of change. Allied core courses in construction and history help fulfill the synthetic emphasis of the year.

Third Year sequences an examination of scalar, systemic, and material aspects of the built environment with the fall semester designing housing and the spring semester an institutional building. The year emphasizes siting and urbanism, exploring new models of living and new ways of connecting to community. An overarching emphasis on climate change asks difficult questions about how much space is required compared with how much waste designs produce, what materials are used, and how to minimize environmental impact. Students examine performative aspects of projects by studying climatic issues using Insight energy analysis and daylight performance analysis through Revit. Allied core courses in structures and environmental control systems, and landscape and urbanism round out the emphasis on building sustainably in an urban environment.

Fourth and Fifth Year coursework provides for both programmatic diversity through options studios, while also testing a student's ability to synthesize and integrate within a design project. Options Studios vary in scale, scope, choice of site, conceptual basis, building type, advanced design processes, and other parameters as well as those offered in the Urban Design program. Prior to the pandemic, students could also study abroad. The fourth year culminates the allied sequence with the two professional practice courses followed by a wide range of electives to be taken in the last two years. Two advanced studios engage and apply knowledge accrued during the core in developing architectural projects. These synthesize user and regulatory requirements, site conditions, and accessibility, building envelope systems and assemblies, structural systems, environmental control systems, and life safety

systems. An accompanying seminar dwells on each while also measuring the environmental impacts of design decisions.

M.Arch: The first two years of the Master of Architecture (M.Arch.) follow a required core sequence of four design studios taught alongside a series of progressive and cumulative co-requisites covering architectural history, integrated building systems, digital design and representation applications. After completion of this mandatory core sequence, third year students can select design studios that allow specializations including, urban, sustainable, and advanced computational design as well as complete a capstone studio.

First Year introduces students to the discipline and practice of architecture, including the current discourse in the discipline and practice, and the fundamentals of architectural design thinking. By developing spatial solutions for different functions and contexts, and how to represent and discuss them, the studios link to Tools and Techniques, Building Construction and History courses. Projects are typically the design of an institutional facility and range from Artists' workshops in Florence, to a community theater for Jersey City, N.J.

Second Year builds on knowledge gained from first year, second year students learn about different building types while addressing organizational, social, technical, spatial, and aesthetic issues. Studios first focus on housing, followed by an examination of the relationship between a building and its urban context.

Third Year can select design studios that allow specializations including, urban, sustainable, and advanced computational design. A capstone studio addresses twelve advanced design issues in depth, integrating organizational, social, technical, spatial, and aesthetic issues within consistently articulated design solutions.

Extracurricular Experiences
The NJSOA provides a variety of exposures to the culture of design excellence outside the studios available for both B.Arch and M.Arch students. These include:

Super Jury is an event the NJSOA now hosts close to the last day of classes each semester. Long a tradition at the school, the school revived it after a hiatus in 2016. Pre-pandemic the school showcased the best studio projects as an end of year event in spaces throughout Weston Hall. Invited reviewers would roam the building followed by an entourage of students and faculty who listened attentively to reviewer comments. After the pandemic the event shifted online and became an end of semester event: The fall semester showcases undergraduate work form the core studios, while the spring semester showcases both graduate studio work and that of options and advanced studios. This event provides invaluable evidence for assessing what succeeds and what can be improved. See folder of posters here.

Design Showcase typically occurs every Spring and includes a keynote lecture, vendor exhibits, and displays by both student and firm (mostly alumni) work. While primarily a fundraising event that helps support the programs and students, it connects top students with architecture and design practitioners and building industry representatives. A panel of critics review work and select winners. The event allows a snapshot of the best work each year, and like super jury, allows faculty to compare work and take in comments from guests.The showcase also gives alumni and professional practitioners an opportunity to comment on student learning outcomes. See Link.

AIAS Firm Tours: Pre-pandemic, NJSOA's AIAS chapter organized firm tours with Snøhetta, ODA Architecture, COOKFOX, SOMA, NK Architects, and Tobin | Parnes Design, among

others. These firms showcase state-of-the-practice work as well as theory design studio environments. See Newsletter.

AIA Newark and Suburban Awards: The local AIA section annually invites students from NJIT and Kean University to participate in this event alongside practitioners. See 5.2.5.

Assessment, Outcome, and Opportunity
The NJSOA maintains a multi-tiered framework for the assessment and evolution of curricular policies related to design. These begin with faculty self-assessment and student evaluation of each course at the end of the semester which are then reviewed by the school director and others. Kepler plays an essential role in evaluating studio work to set class-wide standards and to determine whether the standards have been met. These include midterm and final evaluations of design studio work by faculty and coordinators in each year, regular Curriculum Committee meetings, and regular HCAD faculty meetings. In addition, the NJSOA schedules a variety of outreach activities (often in concert with A+D) directly to faculty, students, and student organizations to advance curricular development. Further described below are both the multi-tiered system and outreach activities.

Midterm and Final Evaluations by studio instructors evaluate effectiveness and establish common grading standards. To varying degrees, these evaluations occur for all B.Arch years and M.Arch studios, but especially at the Advanced Studio level. Organized through the studio-year coordinators, these meetings also allow the faculty to determine whether the work satisfies curricular goals established in the syllabus and that outcomes are consistent across all studios. Typical curricular goals include meeting NAAB requirements, coordinating with allied courses such as systems or history, and following the HCAD academic objectives.

Year coordinators bring these findings to the Curriculum Committee for guidance and necessary adjustment. Given that studio coordinators make up most of the committee's membership, design concerns are its paramount topic with an emphasis on how allied course influence can inform design. These assessments lead to adjustments ranging from those that require NJIT approval—such as the recent 2019 Curriculum responding to the new NAAB requirements—to content changes that do not require NJIT approval.

Other experiences at HCAD provide input for assessment of design education, including HCAD Faculty Meetings (see 5.1.2), periodical meeting with AIAS, Alpha Rho Chi, and NOMA student organizations, and Pizza with the Dean, a regular open forum at which students can express concerns often associated with design studios.

A signal outcome of NJSOA assessment leading to 2019 Curricular Restructuring involved creating bookend courses for the studio sequence in both programs. The sequence begins with Tools and Techniques I (Tools of Thinking) in the first semester. This new course provides an overview of the discipline of architecture, its history, and current debates. The Curriculum Committee's assessment that led to this new course found that students were unable to contextualize projects with the current discourse of architecture until after History IV in their 3rd year. This restructuring introduces that knowledge much sooner.

A related assessment outcome led to the formulation of two advanced studios that engage and apply knowledge accrued during the core to advanced design studio projects. An accompanying seminar focuses on the technical and regulatory aspects of these projects and on measuring the environmental impacts of design decisions. For more on these courses, see SC.5 and SC.6.

Opportunities taken up in long range curricular planning include assessing the myriad adaptations developed during the pandemic lockdowns and how these can be applied to

future design teaching. An initial step in this assessment will be to gauge the effectiveness of hybrid course delivery in the 2022 fall semester.

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

Program Response:
The NJSOA strives to put into practice the professional and disciplinary stated shared value pertaining to "Environmental Stewardship and Professional Responsibility" throughout all its professional and pre-/post-professional academic programs in the Hiller College. Students benefit from multiple curricular offerings in the College: a formal interdisciplinary sustainability minor at the undergraduate level; opportunities to specialize in sustainable design studies at the graduate level; and pointed scholarship, research, and symposia focused on the dynamic interplay of natural and built environments. This work is led by both faculty and staff through courses and ongoing activities in multiple established centers and labs.

Curricular Experiences
Key environmentally sustainable design components are integrated into the curriculum in numerous required courses and electives at both the undergraduate and graduate levels. The Technical Building Systems and Professional Practice Courses sequence foreground environmental sustainability at multiple points. Both B.Arch and M.Arch degrees require students to complete the Advanced Architecture Studio II. These upper level studios evaluate student design proposals that synthesize a diverse range of design determinants while integrating technical requirements and performance. Two considered criteria are measurable environmental operational performance and embodied environmental impact.

Many upper level options studios, electives, and independent studies offered to undergraduate and graduate Architecture students also focus on topics that include sustainable resource management, design and the "triple bottom line", and integrating formal life cycle assessment in design.

Required undergraduate courses include:
ARCH 196 Architecture Studio II: Students are introduced to the role designers play as environmental stewards through the design of the built environment. Water conservation and the use of renewable energy sources are two overt design goals that help students begin to grapple with the question "Does the design have an overall positive effect on the natural and built environment?"

ARCH 472 – Professional Practice I: the course examines different areas of analysis, including regional concerns, programming for different building types, mobility, social equity, sustainability, existing and new construction, as well as the vast changes that digital technology is bringing.

ARCH 561 Synthesis Seminar: The course requires measurable environmental impact regarding minimum carbon footprint, use of sustainable materials, water conservation, and renewable energy sources. The course asks students: Does the proposed design demonstrate an understanding of sustainability in its selection and use of materials and systems? Does the design have an overall positive effect on the natural and built environment. Based upon a Tally analysis, students must illustrate and prove how the comparable global warming impact, ozone depletion effect, smog formation contribution,

primary energy demand, and non-renewable versus renewable energy demand change between the initial design and final design proposal. For information, see SC.5 and SC.6.

ARCH 595 Advanced Studio II: Taught in conjunction with above mentioned Synthesis Seminar, this synthetic capstone studio integrates sustainable design alternatives through an iterative design process. For information, see SC.5 and SC.6.

Required graduate courses with identical treatment of these topics include:
ARCH 569G – Professional Practice I: This course examines different areas of analysis, including regional concerns, programming for different building types, mobility, social equity, sustainability, existing and new construction, as well as the vast changes that digital technology is bringing.

ARCH 547G – Synthesis Seminar: The course requires measurable environmental impact regarding minimum carbon footprint, use of sustainable materials, water conservation, and renewable energy sources. The course asks students: Does the proposed design demonstrate an understanding of sustainability in its selection and use of materials and systems? Does the design have an overall positive effect on the natural and built environment. Based upon a Tally analysis, students must illustrate and prove how the comparable global warming impact, ozone depletion effect, smog formation contribution, primary energy demand, and non-renewable versus renewable energy demand change between the initial design and final design proposal. For information, see SC.5 and SC.6.

ARCH 505G Advanced Studio II: Taught in conjunction with above mentioned Synthesis Seminar, this synthetic capstone studio integrates sustainable design alternatives through an iterative design process. For information, see SC.5 and SC.6.

B.Arch Sustainability Minor: Many B.Arch students elect to complete the 5-course interdisciplinary Minor in Environmental Studies and Sustainability offered through the College of Science and Liberal Arts. The growing list of approved architecture courses include:
- ARCH 327 (Environmental Control System)
- ARCH 483 (Reuse and Renewal)
- ARCH 538 (Sustainable Architecture)
- ARCH 546 (Design and Optimization of the Building Envelope)
- ARCH 583 (Sustainability Elective)

M.Arch Sustainability Concentration: M.Arch students take classes with their M.S. Arch colleagues in the Sustainability Concentration where students tackle sustainability challenges by addressing environmental impacts associated with construction and energy consumption from the scale of the individual building to that of the city. Students learn about energy efficiency in buildings, passive house standards, Life Cycle Assessment, and how design decisions impact the environment. Working with our Center for Resilient Design, students help develop strategic design responses to increasingly severe weather conditions exacerbated by global warming.

Extracurricular Experiences
Beyond curricular exposure, the NJSOA maintains ongoing sustainable design research and scholarship that further advances knowledge.

Research Centers: Research conducted in HCAD's three Centers: 1) the Center for Community Systems; 2) the Center for Building Knowledge; and 3) the Center for Resilient Systems support significant extracurricular activity in sustainable design and research. (see Section 1 for further information)

Design Showcase: This spring 2022 event hosted Grimshaw's Chairman Andrew Whalley, who delivered a keynote lecture under the theme of ZERO. The keynote illuminated the importance of designing net-zero-carbon buildings and their life cycle performance. Grimshaw committed itself to designing net-zero-carbon buildings and operating as a net-zero company.

NJIT's 2022 Sustainability Report: NJIT has developed and released a report highlighting efforts the university is undertaking in support of sustainability — a core value, guiding theme and institutional learning goal. NJIT is ranked No. 96 globally by the Times Higher Education Impact Rankings that assess universities' efforts toward achieving U.N.-adopted Sustainable Development Goals (SDGs) that reflect "the world's shared plan to end extreme poverty, reduce inequality, and protect the planet by 2030." Link to report. In 2022, NJIT hired a new staff member who will be crucial to the future of ecological sustainability at the school: an Assistant Director of Sustainability. See Newsletter.

In addition, various members of the HCAD community–faculty, administrators, and students–are leaders in sustainable design and research. These individuals maintain academic connections to students and lead sustainability initiative and assessment :

John Cays, Associate Dean for Academic Affairs, John Cays' recent book *Environmental Life Cycle Approach to Design: LCA for Designers and the Design Market* earned him the LCA Education Leadership award at ALCLA2021. This past spring John co-chaired the second annual three-day eLCAd 2022 symposium where designers along with experts in life cycle assessment (LCA) explored the strategies and tools of environmental LCA in architecture and design.

Deane Evans FAIA, Associate Dean for Research, was the recent recipient of the 2022 Upjohn Research Initiative for the project *Architects and Grid-Interactive Efficient Buildings (GEBs): The Role of the Profession in the Emerging Field of GEBs*. The project seeks to better inform architects about GEBs, helping buildings to adapt and reduce the impacts of climate change. The results will be incorporated into an online educational toolkit designed to help architects understand the practical, real-world implications of GEBs on their practices.

Martina Decker, Associate Professor and head of The Material Dynamics Lab serves as a vital junction for interdisciplinary innovation, connecting a variety of NJIT's departments, research centers and specialized labs to generate design solutions to an assortment of problems, including: water conservation and quality, energy conservation and production, health and safety, and security.

Martina Decker and Andrzej Zarzycki (both Associate Professors) are Co-PI's working with NJIT colleagues from Civil and Environmental Engineering on a two-year grant from the N.J. Department of Environmental Protection focused on "Design and Fabrication of Recycled Glass Composite Construction Materials and Products."

Gernot Riether, Associate Professor, is on the Board of Directors of the Consortium for Sustainable Urbanization (CSU), Affiliated with UN Habitat and UN ECOSOC. Associate Professor Gernot Riether was awarded two grants with Mohamed Mahgoub from the College of Engineering: 1) a $60,000 grant from Precast Concrete Industry (PCI) Foundation; and 2) a $60,000 grant from the National Precast Concrete Association (NPCS) Foundation. In Prof. Gernot Riether's ARCH 463/464 Options Studio this past spring students completed the ACSA HABITAT Design Competition: Climate Positive Concrete Housing competition, exploring more sustainable ways of producing concrete and how it can be applied in affordable micro-housing. The studio is supported by a four-year grant from the Precast Concrete Institute (PCI) Foundation.

Jeongseo Lee (PhD student) and **Elizabeth Kowalchuk** (undergraduate student) received one of the 2022 Dana Knox Research Showcase medals for "An Evaluation Framework for a Net-Zero Energy Building's Energy and IEQ Performance." These students have contributed to sustainable design practices through their design and research projects done under the supervision of our faculty member Prof. Hyojin Kim.

Assessment, Outcome, and Opportunity
The leadership cohort above plays an essential role in informing NJSOA Curriculum Committee on permeating sustainability concerns the curriculum. Otherwise, faculty self-assessment and student evaluation of each course occur at the end of the semester. These are then reviewed by the school director and others. The NJSOA Curriculum Committee assesses how professional requirements for specific professional degree paths are met in the curriculum. The committee reviews course sequences at the end of each academic year to assess whether they met the NAAB Matrices. Kepler plays an essential role in this evaluation to determine whether standards have been met. These annual assessments inform long range planning.

A recent outcome of its assessment occurred as part of the review that led to a new curriculum in 2019, when undergraduate and graduate courses were restructured and sustainability considerations reiterated course by course so that students would be able to measure energy and carbon footprints in the Advanced Studio adjacent seminar in each program. These measurable building performance factors include, the design and performance of energy consumption, day-lighting, solar protection, natural ventilation, natural cooling, building insulation-thermal mass, building form and orientation, climate, weather and diurnal response, solar access, natural ventilation, and alternative energy sources.

Opportunities in this section include further assessing the effectiveness of the course arrangement and furthering its application in contemporary practice.

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

Program Response:
Since its establishment in 1973, the NJ School of Architecture has framed architectural education as the acquisition of professional and liberal knowledge. Required undergraduate and graduate courses in the history and theory of architecture and urbanism ensure that students understand the complex interplay of social, cultural, economic, and political forces operating locally, regionally, nationally, and globally.

B.Arch & M.Arch: Our two-semester sequences, Arch 210-Arch 211 (undergraduate) and Arch 528G-Arch 529G (graduate), are organized chronologically, but the content is thematically driven, focusing on the relationship between built form and human settlement and community making, technology, trade, religion, humanism, absolutism, enlightenment, colonialism, capitalism, nationalism, militarism, migration, industrialization, and modernization. The first semester in each sequence covers the Paleolithic era up to and including the age of empires. Eschewing the traditional "caves to cathedrals" sequence, our first semester history courses intentionally push past the European Middle Ages to conclude with the European Renaissance. This gives our second semester courses a deliberate anthropocentric focus as we explore developments of architecture and urbanism in the context of the global consequences of human activity from the seventeenth century to the present.

B.Arch only: In addition to lecture courses, undergraduates are also required to take two "selectives" in history and theory. Because these selective classes are smaller in size and

narrower in scope, they allow students to delve deeper into the specific areas that interest them. the NJSOA's rotating selective courses frequently focus on urban development in global contexts, ranging from North America to Middle East/North Africa. Recent offerings have also dealt with architecture and social identity and is issues in preservation and sustainability.

Extracurricular Experiences
NJSOA history faculty play an important role in creating connectivity between the school and a broader historical continuum. This begins with engagement with the Federated Department of History of NJIT and Rutgers and extends to the city, state, and nation. Several individuals have contributed to extracurricular experiences related to history:

Gabrielle Esperdy, PhD leads the history faculty and is Editor-in-Chief of the Society of Architectural Historians Archipedia/Buildings of the United States publication program, Associate Editor of the Buildings of the United State book series, and serves on the Executive Committee of the Society of Architectural Historians.

Anthony Schuman was instrumental in the publication of Newark Landmark Treasures in 2016 working with the Newark Landmarks and Preservation Committee as part of Newark's celebration of the 350th anniversary of its founding in 1666, the third oldest major city on the United States. Four students in Prof. Schuman's "Envisioning Newark" seminar served as research assistants: April Covington, Fathia Elmenghani, Brian Engelmann and Edward Lay. See Link.

Darius Sollohub AIA and **Anthony Schuman** conducted research and coursework pursuing a design strategy to help save Newark's Essex County Jail, designed by John Haviland, a prominent architect of the early 19th century. Coordinated with a $70,500 grant from the New Jersey Historic Trust, the initiative mobilized a studio to proposes passive recreation on the jail site, fusing it with other academic and residential programs. See Link.

Assessment, Outcome, and Opportunity
The HCAD's history faculty leadership plays an essential role informing NJSOA Curriculum Committee on the critical importance of history to the curriculum. Faculty self-assessment and student evaluation of courses occur at the end of the semester and are then reviewed by the school director and others. The NJSOA Curriculum Committee plays a central role in assessing how requirements for the teaching of history are met in the curriculum. The committee reviews course sequences at the end of each academic year to assess whether they met the NAAB Matrices. These annual assessments provide critical evidence for long range planning.

A recent outcome of its assessment occurred as part of a new curriculum restructuring in 2019, when it found that the curriculum did not have enough seminar size courses in History and Theory. This issue was resolved by compressing the History core sequence into two core courses and adding two required History/Theory elective courses. This produced more options for students that can now choose from a larger set of History/Theory topics. Contemporary practice seen as a part of a historical continuum was placed in the introductory Tools and Techniques sequence. Other historical arcs related to urbanism and landscape located in a new Landscape and Urbanism class. These systemic reforms change both programs in a similar manner.

Opportunities in this section emphasize to students the importance of historical context to contemporary architecture. Another opportunity is to engage with historic preservation in Newark, one of the nation's oldest cities. The Newark Design Collaborative provides a vehicle for this opportunity. (See Shared Values: Leadership, Collaboration, and Community Engagement)

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

Program Response:
Being embedded within an R-1 university is central to the culture of NJSOA studios and allied coursework. After the first year, every studio at the undergraduate and graduate level includes a research phase at the beginning of each semester. This lays the research required to begin solving a design problem. An emphasis on research transcends the curriculum in activities initiated by both students, faculty, and administrators. The curriculum committee assesses the value research and its continual review of coursework and long-range planning.

Curricular Experiences
B.Arch only:
Arch 395& Arch 396 In these third-year studios, groups research a range of topics from climate change issues, carbon decreased construction methods and materials, and different typologies.

Arch 463 & Arch 563 studios immerse themselves in research projects—often in service to real-world issues.Tara Narahara and Andrzej Zarzycki lead these efforts.

ARCH 301 Digital Modeling & Fabrication
ARCH 337 Building Information Modeling
ARCH 461 Resilient Structural Design & Construction
ARCH 541 Material Systems in Design
ARCH 583 Media ARCHitectures: Immersive Design Tools

Arch 561 encourages the formation of two-person to four- person teams to broadly research the ten NAAB Criteria specified by SC.5 - Design Synthesis and SC.6 - Building Integration for each student to prove and illustrate how each of the ten criteria has been integrated and synthesized in their final design project presented in Arch 596 later individually.

B.Arch & M.Arch:
Arch 472 & 569G (Professional Practice I) emphasize the importance of research to effective programming.

Arch 495, Arch 595, 505G, & Arch 506G each encourage the formation of two-person to four- person teams that engage in project research, evaluation of alternative design strategies, and design reviews.

Extracurricular Experiences
Strong support of research at HCAD provides many avenues for innovation. The school encourages two primary types of research: The first focuses on the history of architecture and design, and the interaction of people with design, as well as the involvement of architects in community development and planning work, all of which have a great deal of social impact. HCAD faculty have published extensively in these areas and have also contributed significantly, through effective community engagement, to demonstrating the power of design and urban planning to improve quality of life for the public at large. The second main area of research has more to do with the technologies, systems and materials of the built environment, with a special focus on improving the performance of buildings through better building science.

HCAD maintains multiple opportunities through individuals and opportunities for research to integrate with course work including:

Deane Evans: Associate Dean of Research at HCAD. Evans has been at the School of Architecture at NJIT since 2001, serving as Executive Director of the Center for Building Knowledge (CBK) and the Center for Resilient Design. Evans is a registered architect and a Fellow of the American Institute of Architects.

Research Centers: Research conducted in HCAD's three Centers: 1) the Center for Community Systems; 2) the Center for Building Knowledge; and 3) the Center for Resilient Systems support significant extracurricular activity in sustainable design and research. (see Section 1 for further information). For the last 20 years, CBK and CRD have consistently employed students to assist in their research and education activities. Students support CBK PI's in both their research activities and in the production of final deliverables. Historically, these students have been primarily undergraduate Architecture students, although in recent years Digital Design and Industrial Design students have been included. In a typical year, 3-5 students are employed during the school year, with 2-3 continuing over the summer. Most recently, a large cohort of 10+ additional students (graduate and undergraduate) have been employed in a multi-year project to document all the K-12 school facilities in Newark. A similar project was conducted in 2012, with the same number of students participating. See Link for more information.

The Hillier College also has a number of laboratories involved in active research, including the Newark Design Collaborative, the Building Energy and Built Environment Laboratory (led by Associate Professor Hyojin Yim), the Material Dynamics Laboratory (led by Associate Professor Martina Decker) , the https://design.njit.edu/building-dynamics-lab (led by Associate Professor Vera Parlac) and the Design Computation Laboratory (led by Associate Professor Taro Narahara).

AIAS: This student organization supports a "A pedagogy that promotes experimentation and exploration." (see link)

Grants/Patents: Student benefit through faculty pursuing grants (follow link) and applying for patents (follow link). Faculty activity in this area results in employment opportunities for students.

National Science Foundation's Innovation Corps (I-Corps): This $300 regional funded program organized through the NJIT School of Management and NJ Center for Innovation Acceleration provides provide specialized training and mini-grants of up to $3,000 to student/faculty teams interested in exploring the commercial viability of their ideas for products. HCAD Faculty Taro Narahara, Vera Parlac, Darius Sollohub, and Andrzej Zarzycki have participated.

Solar Decathlon: Student participation in this program embraced emerging technologies. (see Section PC.6 for further information)

Assessment, Outcome, and Opportunity
Assessing the impact of research is a regular activity of the Curriculum Committee as part of its short term and long term planning. The committee regularly discusses responses to technological change in studios and its importance and assesses how it impacts design and uses Kepler as an evaluation tool. Associate Dean of Research Deane Evans plays an important leadership role supplemental to that of the committee.

A significant outcome related to regulatory frameworks resulting from the 2019 Curricular Restructuring (follow link), which expanding technology offerings such as Arch 301 Digital

Modeling & Fabrication, ARCH 461 Resilient Structural Design & Construction, and ARCH 541 Material Systems in Design. The restructuring also introduced technology selectives such as Prefabricated ARCHitectural Construction High-performance Facade Design. Collectively these will reinforce knowledge necessary for student success in the three-course capstone combination in both programs described in SC.5 and SC.6.

An opportunity for HCAD is to expand its opportunities for collaboration as NJIT's research reputation grows.

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

Program Response:
Success in architecture requires both collaboration and leadership. A collaborative spirit pervades the culture of NJSOA studios and allied coursework. The ability to collaborate effectively also necessitates leadership. After the first year, every studio at the undergraduate and graduate level includes collaborative work at the beginning of each semester. This work includes the creation of common documents, the building of site models, and other forms of research required to begin solving a design problem. Collaborative studios predominate in the options year and the Advance Studios have a strong collaborative beginning. The spirit of collaboration transcends the curriculum in activities initiated by both students, faculty, and administrators. The curriculum committee assesses the value of this collaboration and its continual review of coursework and long-range planning.

Curricular Experiences
B.Arch only:
Arch 395& Arch 396 In these third-year studios, groups research, analyze, and present using cross-sections; perform a case study analysis on topics ranging from climate change issues, carbon decreased construction methods and materials, and different typologies; and collectively build the site model for their section.

Arch 463& Arch 563 studios that take on large scale projects—often in service to real-world clients—typically follow a collaborative structure as a matter of necessity, operating in a para-professional grouping that include leadership accountability. These include the Penn Station Studio taught by Darius Sollohub, the Newark GSA studio taught by Georgeen Theodore and the Pod and Parklet studios taught by Erin Pellegrino and Charlie Firestone. (See Link and Newsletter)

Arch 561 encourages the formation of two-person to four- person teams to broadly research the ten NAAB Criteria specified by SC.5 - Design Synthesis and SC.6 - Building Integration for each student to prove and illustrate how each of the ten criteria has been integrated and synthesized in their final design project presented in Arch 596 later individually.

B.Arch & M.Arch:
Arch 472 & 569G (Professional Practice I) requires students to assemble in teams to program a campus building in reverse and to develop a 100-unit housing project that meets local zoning and egress codes and shows financial viability through a Pro Forma cost analysis.

Arch 495, Arch 595, 505G, & Arch 506G each encourage the formation of two-person to four- person research, design or discussion teams that engage in project research, evaluation of alternative design strategies, and design reviews.

Extracurricular Experiences
The NJSOA provides a variety of leadership and collaborative experiences outside the coursework open to both B.Arch and M.Arch students. These include:

Newark Design Collaborative: This organization seeks to plan and design for a more equitable, sustainable, and prosperous Newark. Working in partnership with the City of Newark and its leaders, the NDC brings together the expertise and experience of NJIT faculty and community stakeholders. Based on decades of teaching Newark-focused coursework, the collaborative aims to contribute its accrued expertise to foster the best possible outcomes for Newark's future development. (See Shared Values: Leadership, Collaboration, and Community Engagement)

AIAS: The American Institute of Architecture Students chapter at HCAD is an independent, nonprofit, student-run organization that professes that it is "dedicated to advancing leadership, design, and service among architecture students." The mission of its Freedom by Design program is also to "enrich communities in a spirit of collaboration" through community outreach, empowering its members and students to be good citizens on their campuses and in their communities. A unique aspect of the chapter is the operation of 2D and 3D printing services within HCAD. These "by-students, for-students" services are another way the organization instills a culture of leadership and provides affordability and quality services to fellow students.

Solar Decathlon: In 2018, the College traveled again to China to build a solar house - this time partnering with the China National Building Materials International Engineering Group and Wuhan University. The house integrated the latest solar technology and a new formal expression to multi-generational living in the "New Energy Smart House."

Assessment, Outcome, and Opportunity
Assessing leadership and collaboration is a regular activity of the Curriculum Committee as part of its short term and long term planning. The committee regularly discusses common work in studios and its importance and assesses how collaboration affects learning. As with other courses, faculty self-assessment and student evaluation of each course occur at the end of the semester. These are then reviewed by the school director and others. Kepler plays an essential role in this evaluation in evaluating collaborative work across all sections. The NJSOA Curriculum Committee reviews course sequences at the end of each academic year to assess whether they met the NAAB Matrices.

The Curriculum Committee also understands the importance of the most local and granular assessment. At a local level, NJSOA instructors recognize that collaboration is difficult to verify and use various forms to assess effectiveness. These assessments include student self-evaluations and commentary from NJIT Course Evaluations. At a granular level, the need for end of semester printing and how it impacts the collaborative printing facilities require regular and careful assessment with regard to timing and overburdening students.

Since the last accreditation, improvements in 3d printing technology have greatly expanded, and the student-run printing facility has attempted to keep pace. In parallel, NJIT has opened a Maker Space that also includes 3d printers and other equipment. How students benefit from these devices impacts everything from requiring their use for collaborative models to the burden a course requirement may place on student volunteers working collaboratively.

While leadership and collaboration were already embedded in coursework at the NJSOA, there were no direct outcomes resulting from the 2019 Curriculum Restructuring.

With regard to ongoing opportunities, the NJSOA recognizes several related to collaboration and leadership:

Newark Design Collaborative leadership is currently planning and fundraising for a downtown Newark space to enhance its collaborative mission. The NDC hopes to host exhibitions, receptions, public meetings, design reviews, and other programs. An ultimate goal is to move up to three studio to this location as home for collaborative studios.(See Shared Values: Leadership, Collaboration, and Community Engagement)

Design Build: In 2016 one of the hallmark experiences at the NJSOA, the so-called "Brick Build," held its last competition. Once a required collaboration and leadership building exercise for every second-year undergraduate, the program ceased because of change in leadership at NJIT and other reasons. Leadership of the NDC has attempted to reprise a version with the design-build parklet studio. Whether this occurs for every architecture student or for the ones taking the options studio will be a matter of assessment by both the NDC and the Curriculum Committee.

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

Program Response:
The NJSOA faculty and administration have historically benefitted from an excellent rapport with students. While respectful, it has always been candid. The relationship has also harnessed the dynamic energy of the HCAD student body and its student organizations.

This year saw the completion of one of the student bodies greatest accomplishments: a new Learning and Teaching Culture Policy (Link here). Replacing the older Studio Culture Policy document (which had been written by faculty), the revised and renamed version was spearheaded by the school's AIAS chapter, who led an inclusive process, hosting a series of meetings of volunteer students, full-time faculty, and adjunct instructors. The constructive dialogue that resulted–focusing on fostering community–was as important as the creation of the policy itself.

Curricular Experiences
As of the 21-22 Academic year, every syllabus in the undergraduate and graduate program at the NJSOA must include the following statement and a link to the Learning and Teaching Culture Policy document: " In addition to the overarching values and ethics of the university, the New Jersey School of Architecture (NJSoA) is dedicated to optimism, diversity and solidarity, professional conduct, constructive evaluation and instruction, collaborative community, health and wellbeing, time management and school-life-work balance, respectful stewardship and space management, and well-rounded enrichment. The pedagogy of architecture and design is as complex as it is rewarding, and as dynamically evolving as the people who learn and teach it. This understanding resides at the core of the NJIT Learning and Teaching Culture Policy."

In addition to the overarching values and ethics of the university, the NJSOA is dedicated to: optimism, diversity and solidarity, professional conduct, constructive evaluations and instruction, collaborative community, health and wellbeing, time management and school-life-work balance, respectful stewardship and space management, and well-rounded enrichment. The document professes that the pedagogy of architecture and design is as complex as it is

rewarding, and as dynamically evolving as the people who learn and teach it. That understanding is the core of this document.

Extracurricular Experiences
Student Organizations: Regular meetings with AIAS, Alpha Rho Chi, and NOMA student organizations maintain the rapport established through the Learning and Teaching Culture Policy.

Outreach: Pizza with the Dean, the traditional open forum at which students express student concerns, is an important conduit to maintain the policy's effectiveness..

Assessment, Outcome, and Opportunity
The Learning & Teaching Culture Policy is a self-described living document and thus under constant reassessment, implicitly included in all short term and long term planning.Its recent issuance is a significant outcome of a process that had begun before the pandemic. The policy is maintained by a committee of students, faculty, and administrators, and designed to guide the NJSOA learning community toward a productive, ethical, and healthy environment for students and faculty. This goal can only be achieved by ardently working together, both as a team and as committed members of the school. By nature of the institution and the object of its studies, the NJSOA community is always learning and practicing how to operate and function to the best of its abilities.

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

Program Response:
HCAD's commitment to social equity and inclusion suffuses all aspects of our architecture programs. NJSOA is a diverse community that promotes a culture of mutual respect across and between our student cohorts, faculty, lectures and adjunct instructors, and administrators and staff. This is reflected in our group activities and individual interactions, whether curricular or extracurricular.

Curricular Experiences
Tools & Techniques - Arch 110: In their very first semester, students in Arch 110 are exposed to issues of equity and inclusion in lectures and discussions dealing with the profession of architecture and the image of the architect, people and places, intersectionality and space, and architecture and labor.

History I & II - Arch210-211: In this two-semester undergraduate history sequence students are introduced to major global developments in architecture from prehistory to the present, in lectures that deliberately counter the western and Euro-centric bias that still dominate the discourse of many professional schools. In Arch 211, in particular, architectural and urban developments are placed into the necessary contexts of settler colonialism, extractive economies, and indigenous and racial exploitation from circa 1600 to the present. In upper undergraduate and graduate courses, student understanding is deepened in electives that explore racial and environmental injustice (Envisioning Newark, Land Remediation) and the ways that equity and identity are (not) manifest in the constructed environments (Design and Social Identity, Mapping Equity).

Extracurricular Experiences
Beyond curricular exposure, the NJSOA maintains an ongoing pursuit of equity in various entities:

Newark Design Collaborative: This organization features equity prominently in its mission statement along with sustainability (both environmental and social), and prosperity. Based on decades of teaching Newark-focused coursework, the collaborative aims to contribute its accrued expertise to foster equitable outcomes for Newark's future.(See Shared Values: Leadership, Collaboration, and Community Engagement)

AIAS: The American Institute of Architecture Students chapter at HCAD is a student-run organization that professes being "dedicated to advancing leadership, design, and service among architecture students." The mission of its affiliated Freedom by Design program is also to "empower our members and students as a whole to be good citizens on their campuses and in their communities." AIAS's work within the school and around Newark has been recognized in the form of several national and local awards, including the the 2016 AGA "Can You Dip It?" Video Showdown and being named named 2016-2017 Organization Of The Year by NJIT. The organization has also been been featured on the covers of nationally-distributed magazines such as AIAS CRIT.

NOMAS: The National Organization of Minority Architecture Students is a pre-professional group of undergraduate and graduate students who are part of a national network of NOMAS chapters. NOMAS is dedicated to encouraging awareness about the past, present, and future role of minorities in the architecture community.

Assessment, Outcome, and Opportunity
Assessment in the school's Learning and Teaching Culture Policy and is animated by a commitment to diversity and solidarity and to the cultivation of an inclusive school culture. Intended as a "living document" rather than a static policy, the LTCP guides the NJSOA to become more productive, more ethical, and healthier, both mentally and physically in an iterative manner as a continuing and collective assessment. While this is articulated in the LTCP with language echoing that of the NAAB's PC8, it also expands upon PC8 by stressing the importance of diversity in "the history we teach, the behaviors we model, and the buildings we design."

An outcome of the adoption of the LTCP is that it is now reflected in required and elective classes at all levels of the architecture programs. Instructors now have the document to reference directly. Its development during the 2021-2022 academic year by a student-led group that included AIAS leadership as well as faculty, administrators and staff, proves that the LTCP is in itself an assessment with the document as its outcome. Its ongoing reevaluation embeds in it the commitment to long range planning at the NJSOA.

The adoption of the LTCP also provides a platform for advancing diversity and supporting activities such as the NDC.

3.2 Student Criteria (SC): Student Learning Objectives and Outcomes
A program must demonstrate how it addresses the following criteria through program curricula and other experiences, with an emphasis on the articulation of learning objectives and assessment.

Both NJSOA programs offer similar curricula and share a single faculty. A common overall approach to achieving student learning objectives and outcomes is to follow a required core sequence of design studios taught alongside a series of progressive and cumulative corequisite courses. These cover the range of topics described in this section and the synergy of this parallel method is designed to achieve the desired outcomes. See 3.1 for an outline of each program and 3.1 - PC.2 for a more detailed description.

Each student criterion description that follows maintains a common structure: Program Response describes the element, **Program Curricula Experience** lists the specific courses that teach it, **Other Experiences** show supporting experiences, and **Assessment Methods & Modifications** and **Assessment Outcomes** describe how and when an element is evaluated and what modifications result.

The most significant outcome coming from a sustained period of assessment is the curricular change coming from the 2019 Curricular Restructuring. While specific change is noted under each criterion, a comprehensive reporting of the change can be found at the Link..

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

Program Response:

Matters relating to Health, Safety and Welfare are discussed, practiced, and evaluated within several core and studio B.Arch and M.Arch courses. The scope of issues presented coordinate and increase in depth as students advance through the curriculum. Technical core courses, including Construction and Environmental Control Systems along with allied classes such as Landscape and Urbanism, introduce the significance of environmental stewardship, sustainability, as well as personal and community well-being within the context of material and building system evaluations, product and material fabrication, life cycling and natural systems. The role that architects occupy concerning these matters is reinforced in these core classes through example, discussion, assignments, and examination.

Studio courses position Health, Safety and Welfare as integral components in the planning and design of student projects. Concepts and practices including but not limited to enhanced daylighting, thermal comfort, ventilation, water resourcing, storm drainage, occupant experience, walkability, open space, and landscape are embedded into a variety of studio curricula. In-studio discussions emphasize their importance and impact while class exercises and final projects demonstrate their incorporation into building design and community planning.

Program Curricula Experience
B.Arch
ARCH 223 Construction I*
ARCH 395 Architecture Studio V - Housing Studio
ARCH 309 Environmental Control Systems I
ARCH 324 Landscape and Urbanism*
ARCH 396 Architecture Studio VI -
ARCH 314 Environmental Control Systems II
ARCH 495 Advanced Architecture Studio I - Pre-integrated Design Studio.
ARCH 463 Options Studio - Research & Collaboration
ARCH 464 Options Studio - Research & Collaboration

M.Arch
ARCH 503G Architecture Studio III
ARCH 543G Environmental Control Systems I
ARCH 549G Landscape and Urbanism
ARCH 504G Architecture Studio IV
ARCH 544G Environmental Control Systems II
ARCH 505G Advanced Architecture Studio I

Approach: Other Experiences
A robust relationship with practice, an overarching embrace of sustainability and its interface with technology, and a sensitivity to equity and the common welfare can be found in the experiences listed under Program Criteria: The Architect Licensing Advisor position, the Integrated Path to Licensure program and the Construction Documents Technology Prep Course provide experiences for how licensure and practice foreground Health, Safety and Welfare (See PC.1). Experiences found under Sections PC.3 - Ecological Knowledge and Responsibility and PC.5 - Research and Innovation emphasize technology and its service to sustainability, such as the NJSOA's grant and research focus, and how equity, social welfare and the common good become articulated through student organizations. See PC.8.

Assessment Methods & Modifications
Faculty self-assessment and student evaluation of each course occurs at the end of each semester. Course sequences are reviewed at the end of each academic year, in conjunction with the NAAB Matrices.The NJSOA Curriculum Committee then plays a central role in assessing how criteria are met in the curriculum. This is accomplished through feedback from faculty, review of evaluations, and review using Kepler. The HCAD Dean's Advisory Board counsels and assesses how to best maintain the rigorous comprehensive design education they expect from their future employees.

Assessment Outcomes
The most significant assessment outcome related to this criterion resulting from the 2019 Curricular Restructuring is the three-course capstone combination in both programs. This modification situates two Advanced Studios to engage and apply knowledge accrued during the core in developing architectural projects. These synthesize user and regulatory requirements, site conditions, accessibility, environmental control systems, and life safety systems, among others in conjunction with an accompanying seminar dwelling on measuring the environmental impacts of design decisions. These courses further benefit from each program's two professional practice courses relocation early enough in the curriculum for the knowledge gained there to be applied. See SC.5 and SC.6 for additional information.

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

Program Response:
The professional practice sequence is designed to expose students to the workings of the profession. This includes the various ways individual architects and architectural firms position themselves within the prevailing creative, cultural, and economic landscape. Ethical considerations, state mandated rules, the regulatory requirements for practice, concepts of risk and negligence as well as the ways that firms deliver architectural services are discussed through the lens of an evolving social and political backdrop.

Disruptions in architectural practice via technological advances, generational impacts and global economic conditions are analyzed from both an historic perspective and with an eye to what the future of practice may look like. Topics are reinforced through case study and select projects and evaluated through class discussion, reporting and testing.

Program Curricula Experience
B.Arch See PC.1 for a detailed description of these courses
ARCH 472 Professional Practice I
ARCH 475 Professional Practice II

Electives

B.Arch
see the Fall 2022 Electives List on HCAD Advising webpage here)

M.Arch See PC.1 for a detailed description of these courses
ARCH 569G Professional Practice I
ARCH 579G Professional Practice II

Approach: Other Experiences
The extracurricular experiences described in PC.1–Architect Licensing Advisor, the Integrated Path to Licensure initiative, the Construction Standards Institute interface, the AIAS Firm Tours, and Career Development Services–all provide supplemental exposure to the responsibilities of practice, the layers of the regulatory environment, as well as the disruptive change underway.

Assessment Methods & Modifications
Faculty self assessment and student evaluation of each course occurs at the end of each semester. The course sequence is reviewed at the end of each academic year, in conjunction with the NAAB Matrices. The NJSOA Curriculum Committee plays a central role in assembling these local assessments in determining how professional practice issues are met in the curriculum. Kepler plays an essential role in this review in determining whether professional practice knowledge had been delivered in coursework.

Assessment Outcomes
An outcome of the 2019 Curricular Restructuring (see link) moved the undergraduate and graduate professional practice courses so they would be offered earlier in the curriculum so that knowledge accrued could better influence studio work. This is especially impactful for the Advance Studio sequences. Course content did not change.

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

Program Response:
Building codes and land use regulations are offered in core technical courses and in design studios. Classes such as Professional Practice, Construction, and Architecture Studio, contain a thorough review of the salient chapters of the International Building Code along with a review of associated regulations such as the Occupational Safety and Health Act (OSHA) and the American with Disabilities Act (ADA). These classes also include content of related requirements including plumbing, accessibility, and life safety codes. The history, principles, and real-world application of land use regulations, including planning and zoning, are explored in the professional practice sequence. These concepts are employed by students in their building planning projects and through the completion of course required building code analysis and zoning studies.

Curricular Experience
B.Arch
ARCH 295 Architecture Studio II
ARCH 296 Architecture Studio IV
ARCH 395 Architecture Studio V
ARCH 396 Architecture Studio VI
ARCH 495 Advanced Architecture Studio I
ARCH 472 Professional Practice I

ARCH 475 Professional Practice II
ARCH 561 Synthesis Seminar

M.Arch
ARCH 503G Architecture Studio III
ARCH 504G Architecture Studio IV
ARCH 505G Advanced Architecture Studio I
ARCH 569G Professional Practice I
ARCH 579G Professional Practice II

Extracurricular Experiences
Many of the extracurricular experiences described in PC.1 related to professional careers are relevant here: These include the Architect Licensing Advisor program, the Integrated Path to Licensure initiative, the Construction Standards Institute interface, the AIAS Firm Tours, and Career Development Services. These all provide supplemental exposure to the regulatory responsibilities of practice related to issues of life safety, land use and zoning, current legal structures, and how architects must comply.

Assessment Methods & Modifications
Faculty self assessment and student evaluation of each course occurs at the end of each semester. Course sequences are reviewed at the end of each academic year, in conjunction with the NAAB Matrices. The NJSOA Curriculum Committee plays a central role in assembling these local assessments in determining how regulatory issues are met in the curriculum. Kepler plays an essential role in this review in both evaluating the quality of work and determining whether the delivery of regulatory issues meet NAAB standards.

Assessment Outcomes
The most significant assessment outcome related to regulatory frameworks resulting from the 2019 Curricular Restructuring is the three-course capstone combination in both programs described in SC.5 and SC.6.

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

Program Response:

Undergraduate students begin the technical building systems course sequence in their second year with introductory and intermediate courses in Construction. The first course is an introduction to construction processes, focusing on wood, steel, masonry, concrete materials and their related assemblies. The second course surveys enclosure joints and assemblies, including roofing, insulation, doors, windows, glass and hybrid systems. It also focuses on interior and exterior finishes and their construction methodology and documentation, including Building Information Modeling (BIM).

The Construction sequence is followed in the third year by introductory and intermediate courses in Environmental Control Systems (ECS) and Structures. ARCH 309 - ECS I covers the basic principles and applications of passive environmental systems utilizing on-site resources to achieve thermal and visual comfort as well as energy and water conservation. The topics include climate analysis, thermal comfort, thermal envelope, solar shading, passive solar heating, passive cooling, visual comfort, daylighting, and renewables. ARCH 314 - ECS II provides students a deeper understanding of the relationship between architectural design and active building systems. The topics include heating and cooling systems, electric lighting design, electrical energy systems, acoustical systems, building

water supply, plumbing systems, and fire protection. ARCH 303 - Structures I begins with the history of building structures, continues by introducing structural behavior, forces and responses in structural systems, and concludes with an introduction to static structural analysis. ARCH 304 - Structures II examines lateral forces, foundations, stability, deflection, long spans and special case structural systems. Methodology involves advanced static structural analysis.

These third-year courses assume students have successfully completed the general education courses MATH 105 and 107 in their first year and PHYS 102 and 102A in their second year. The curriculum committee modified the previous curriculum to remove Construction III and Structures III courses and add a Landscape and Urbanism course, and two required Architectural Technology electives. These electives provide the opportunities for students to concentrate in areas such as computation, sustainability, high performance building systems and assemblies as well as recent developments in project delivery and logistics and other emerging technologies that affect the profession and larger building industry.

The three-year graduate technical building systems sequence begins with Construction I and II in the first year. Taken together, these two Construction courses provide an introductory survey of the general principles and application of Sustainable Design, Site Systems, Structural Systems, Environmental Systems, Envelope Systems, Materials and Assembly Systems applied to low-rise wood and steel structures (in ARCH 541G Const. I) and low and medium-rise concrete and masonry structures (in ARCH 542G - Const. II.)

Graduate students in their second year benefit from a newly added Landscape and Urbanism course where students learn about landscape design in relation to the human condition and develop an understanding of how the design of the constructed urban environment is directly tied into, and affects global climate and our environmental health. Students will learn about access, topography, surrounding buildings, natural systems, adjacent functions and zoning. They also take two ECS courses and two Structures courses.

ARCH 543G - ECS I covers the basic principles and applications of passive environmental systems utilizing on-site resources to achieve thermal and visual comfort as well as energy and water conservation. The topics include climate analysis, thermal comfort, thermal envelope, solar shading, passive solar heating, passive cooling, visual comfort, daylighting, and renewables. ARCH 544G - ECS II provides students a deeper understanding of the relationship between architectural design and active building systems. The topics include heating and cooling systems, electric lighting design, electrical energy systems, acoustical systems, building water supply, plumbing systems, and fire protection. This course is the second of a two-course sequence in building environmental control systems (543G, 544G) focusing on active (mechanical/electrical) solutions.

ARCH 545G - Structures I is an intermediate course focusing on the principles of structural behavior in withstanding gravity and lateral forces and on the evolution, range, and appropriate application of structural systems and the criteria for selecting various structural systems in contemporary architecture. Specific architectural precedents from the 20th century are used as validating examples. ARCH 548G - Structures II is an advanced course dealing with structural computation that will conclude with rigorous case study investigation of hybrid and complex structural systems.

At both the undergraduate and graduate levels, all discrete core technical building systems courses and at least one upper level technical elective are integrated and synthesized into a single architectural project in the Advanced Architecture Studio II course and Synthesis Seminar.

Program Curricula Experience
B.Arch
> ARCH 223 Construction I
> ARCH 224 Construction II
> ARCH 303 Structures I
> ARCH 309 Environmental Control Systems I
> ARCH 324 Landscape and Urbanism
> ARCH 304 Structures II*
> ARCH 314 Environmental Control Systems II
> ARCH Elect Technology
> ARCH 561 Synthesis Seminar*

M.Arch
> ARCH 541G Construction I
> ARCH 542G Construction II
> ARCH 545G Structures I
> ARCH 543G Environmental Control Systems I
> ARCH 549G Landscape and Urbanism
> ARCH 504G Architecture Studio IV
> ARCH 548G Structures II
> ARCH 544G Environmental Control Systems II
> ARCH 505G Advanced Architecture Studio I

Extracurricular Experiences
In addition to research focused primarily on social considerations, HCAD provides many avenues for advancing the knowledge of technologies, systems and materials of the built environment, with a special focus on improving the performance of buildings through better building science. These pursuits are marshaled by Deane Evans, HCAD's Associate Dean of Research who provides an umbrella of administration for HCAD's three Centers: 1) the Center for Community Systems; 2) the Center for Building Knowledge; and 3) the Center for Resilient Systems. (see Section 1 for further information). Students conducting research find part-time employment at these centers.

HCAD's research has led to multiple patents applications (follow link) and the successful writing of grants (follow link). The school has encouraged participation in NJIT's National Science Foundation's Innovation Corps (I-Corps) program, which offers specialized training and mini-grants to teams with interest in exploring the commercial viability of their ideas for products and businesses.

HCAD student organizations such as the AIAS support 'experimentation and exploration," and students have played a critical role in HCAD's Solar Decathlon entry. (see Section X for further information)

Assessment Methods & Modifications
Faculty self assessment and student evaluation of technical courses occurs at the end of each semester and courses are later reviewed at the end of each academic year, in conjunction with the NAAB Matrices for how they impart knowledge associated with construction technology, and assemblies of building assembly and emerging systems. The NJSOA Curriculum Committee plays a central role in assembling these local assessments in determining how those technologies, their economics, and their performance objectives are met in the curriculum. Kepler plays an essential role in this review in both evaluating the quality of work and determining whether the delivery of technological knowledge meets NAAB standards.

Assessment Outcomes

The most significant assessment outcome related to technologies, assemblies and criteria resulting from the 2019 Curricular Restructuring is the three-course capstone combination in both programs described in SC.5 and SC.6.

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

Program Response:
The undergraduate ARCH 595 Advanced Studio II & ARCH 561 Synthesis Seminar and the graduate ARCH 506G Advanced Studio II & ARCH 547G Synthesis Seminar focus on the design of a sufficiently complex architectural design project and constitute a synthetic and summative "capstone project." The School of Architecture developed these courses to address the new NAAB student criteria introduced in the 2020 Conditions to assess students' individual abilities to both "synthesize" and "integrate" an array of discrete technical, regulatory, and programmatic elements into an architectural project.

Program Curricula Experience
B.Arch
ARCH 595 - Advanced Architecture Studio II: This course guides students to achieve the following competencies:

- Explore and analyze various modes of discourse related to Architectural Design. These include site documentation, architectural precedents, verbal presentations, informational diagrams, technical drawings, and analysis of technical requirements.
- Respond critically to discussions of readings, research and the development of alternative architectural designs as they pertain to the architectural project, its site and program, contextual and environmental conditions, and technical requirements.,
- Synthesize multiple design variables and architectural objectives into an independent architectural design proposal.
- Formally present an integrated architectural project including 1) Design Intent Diagrams and Statement, 2) Architectural Drawings at a minimum of four scales, 3) Exploded Axonometric Diagrams, 4) 2D and 3D Building Wall Sections, 5) Perceptual Views, 6) Building Systems Diagrams, 7) Contextual Views 8) Physical Model or Animation, 9) Summary Documentation of Design Process.

ARCH 561 - Synthesis Seminar: In this course, each of the following categories, sub-list of topics and specific questions is to be researched specifically and only as it applies to the design project, site and program by a group of two students, with all sources of information noted.

Each of the following categories, sub-list of topics and specific questions is to be integrated into each student's individual design project, with detailed explanations, diagrams, charts, analytical output and proof of how each criterion is met. This portion of the work is to be accomplished by the individual student. Providing just information without evaluation and explanation is not adequate.

User Requirements: Required relationship between the various specific functions, services, etc., Way-finding Considerations, Specific requirements for each functional type including service and maintenance needs.
- Does the design accomplish the functional needs of the client, and various groups of users?
- Are the rooms and spaces designed to include finish materials, interior design considerations, design and technical decisions for the specified function?

- Does the design include service spaces, mechanical spaces, service access required for the functioning of the building?

Regulatory Requirements: IBC 2021: Occupancy Types, Types of Construction, IBC Maximum Building Areas, IBC Maximum Height, and IBC Number of Stories, Building Separations, Atrium and Shaft requirements, Allowable Floor Area, Restroom requirements, Minimum Corridor and Door Widths and Swings, Fire Protection and Stair Design.
- Does the design accommodate fire safety and other safety requirements, including fire rated materials based upon the function class, maximum floor areas, heights and number of stories of the proposed design?
- Are the various portions of the building appropriately fireproofed and do they meet the IBC standards?
- Are the various surfaces of the building appropriately thermally and acoustically insulated?
- Does each room or space have natural light as required by the IBC and appropriate to its function?
- Does each room or space have natural ventilation or fresh air as required by the IBC and appropriate to its function?
- Does the design carry out the fundamental requirements of the International Building code?

Site Conditions: Pedestrian and Vehicle Access, Topographic Conditions / Steep Slopes, Environmentally Critical Areas, Characteristics of surrounding Architectural, Urban and Landscape Contexts, Adjoining neighborhood Functions and Activities. Historical and Cultural Context.
Zoning, Land use and Planning Policy compliance such as yard setbacks, impervious lot coverage, building coverage, floor area ratios, maximum building height and stories, maximum slopes, wetlands restrictions, historical districts.
- Does the design comply with zoning and land use policies such as setbacks, maximum height, maximum floor area ratios, maximum lot coverage, maximum impervious coverage, etc.?
- To what degree does the design respond to the character of the surrounding physical context including: relationship to existing buildings architectural characteristics and functions, topography, natural landscape and vegetation, principal views, scale, pedestrian and vehicular movement systems, etc.?
- To what degree does the design respond to environmental conditions of the site including: solar orientation, seasonal variation, variations in weather, sunlight, exterior temperature and humidity, wind, precipitation, etc.?
- Is the proposed design an appropriate intervention in the existing landscape or urban context?
- Overall, is the design skillfully and appropriately integrated into its context?

Regulatory Requirements: IBC 2021: Occupancy Types, Types of Construction, IBC Maximum Building Areas, IBC Maximum Height, and IBC Number of Stories, Building Separations, Atrium and Shaft requirements, Allowable Floor Area, Restroom requirements, Minimum Corridor and Door Widths and Swings, Fire Protection and Stair Design.
- Does the design accommodate fire safety and other safety requirements, including fire rated materials based upon the function class, maximum floor areas, heights and number of stories of the proposed design?
- Are the various portions of the building appropriately fireproofed and do they meet the IBC standards?
- Are the various surfaces of the building appropriately thermally and acoustically insulated?

- Does each room or space have natural light as required by the IBC and appropriate to its function?
- Does each room or space have natural ventilation or fresh air as required by the IBC and appropriate to its function?
- Does the design carry out the fundamental requirements of the International Building code?

Accessible Design: Americans with Disability Act Code: Ramp Slopes and Safety Areas, Wheelchair Access, Turning Circles, Refuge Areas, Restroom Design, Elevator requirements.
- Does the circulation system within the building meet general ADA requirements including ramps, elevators, refuge areas, accessible seating and toilet room facilities, wheelchair accessibility?
- Are restrooms designed to meet the IBC requirements?

Measurable Environmental Impact: Minimum Carbon Footprint, Use of Sustainable Materials, Water Conservation, Renewable Energy Sources.
- Does the proposed design demonstrate an understanding of sustainability in its selection and use of materials and systems?
- Does the design have an overall positive effect on the natural and built environment?
- Based upon a Tally analysis illustrate and prove: What is the comparable Global Warming impact, Ozone Depletion effect, Smog Formation contribution, Primary Energy Demand, and Non-Renewable versus Renewable Energy Demand between your initial design and final design proposal?

M.Arch
ARCH 506G Advanced Architecture Studio II – Because there are no differences in the collaterally agreed professional program requirements, the graduate ARCH 506G studio objectives and requirements related to SC.5 are identical to those listed above in the undergraduate ARCH 595 Advanced Architecture Studio II.
ARCH 547G Synthesis Seminar – Because there are no differences in the collaterally agreed professional program requirements, the graduate ARCH 547G seminar objectives and requirements related to SC.5 are identical to those listed above in the undergraduate ARCH 561 Synthesis Seminar.

Approach: Other Experiences
- Design Competition - In addition to a student competition sponsored by the International Institute of Building Enclosure Consultants, or IIBEC, (complemented by in-class presentations on the building envelope by Mott MacDonald).
- Design Awards - one B.Arch and one M.Arch student are chosen each year to receive the best "School of Architecture Integrated Design Studio" project award at the spring Commencement Award Ceremony.

Assessment Methods & Modifications
After assessing our existing "Integrated Design Studio," that effectively addressed requirements outlined in the 2014 NAAB Conditions, we made the decision to locate and evaluate all ten new SC.5 and SC.6 sub-criteria in a single studio along with a sister seminar class. Instead of dividing SC.5 and SC.6 into separate areas of the curriculum, this pair of capstone courses requires students in both professional programs to contend with the full array of the ten sub-criteria within a single architectural project.

The curriculum changes to prepare for 2020 NAAB Conditions included the development of the Synthesis Seminar practicum course. In both the corequisite studio and seminar we commonly refer to the following ten requirements of SC.5 and SC.6 as the "NAAB 10."

- User requirements
- Regulatory requirements
- Site conditions
- Accessible design
- Measurable environmental impact
- Building envelope and assemblies
- Structural systems
- Environmental control systems
- Life safety systems
- Measurable building performance

Many faculty also refer to the "NJSoA 10" which includes Architecture History and Theory, Social and Political Issues, Cultural Issues, Design Theory, etc. amid concerns of a lack of a strong command of architecture literacy and contemporary architecture. While these aspirational curricular components go beyond the minimum NAAB requirements in these courses, we believe they are also appropriate to integrate and synthesize into any architectural project. As such, they are part of both ARCH 495 Advanced Studio I and ARCH 595 Advanced Studio II course work.

What follows is a brief description of how the SC.5 criterion and five sub-criteria are addressed in the undergraduate and graduate curricula and how they are synthesized into a single architectural project:

Assessment Outcomes
Faculty self-assessment and student evaluation of each course occurs at the end of each semester. Course sequences are reviewed at the end of each academic year, in conjunction with the NAAB Matrices. The continuous assessment process recently played by the NJSOA Curriculum Committee and the administration led to the following changes:

Rescheduling of courses
The schedule of when this studio and seminar pair is offered has recently changed to be offered in spring only for both undergraduate and graduate students. Undergraduate students who have completed required courses in the 3-year core curriculum and ARCH 495 Advanced Studio I (offered in the fall) are eligible to enroll in the spring of their 4th year. Those who do not pass either the studio or seminar component have the opportunity to repeat one or the other in subsequent semesters. As no Graduate Summer Options Studios exist, the sequence is straightforward and all graduate students take ARCH 506G Advanced Studio II & ARCH 547G Synthesis Seminar in the spring after ARCH 505G Advanced Studio I in the fall of their 3rd year.

The current Bachelor of Architecture curricular schedule differs from that which was approved in Spring 2020 by: 1) offering the ARCH 495 Advanced Studio I in the fall semester (only); and 2) moving the ARCH 595 Advanced Studio II and co-requisite ARCH 561 Synthesis Seminar from the fall semester to the spring semester (only). This was evaluated first by the Director and the Advisors, who created a spreadsheet of all fourth- and fifth-year students and identified the order in which they completed the four upper-level studios (the ARCH 463 and 464 Options Studios and the ARCH 495 and 595 Advanced Architecture Studios). predictability of enrollment, and provide more time to locate studio teachers and determine faculty assignments to specific studio sections.

Preparation of students
Currently students can take either the Options studios or the Advanced Architecture Design studio sequence following the three-year core sequence. The pre-requisite for ARCH 495 Advanced Architecture Design Studio I is completion of the ARCH 396 Architecture Design Studio VI (with a minimum grade of D, and annual cumulative studio GPA of 2.0 or higher) and the core 3rd year non-studio classes. The pre-requisite for ARCH 595 Advanced Architecture Studio II is ARCH 495, also with a minimum grade of D and annual cumulative studio GPA of 2.0 or higher. This means students can enroll in the Advanced studio sequence upon completion of the 3rd year. Per university policy, without any other prerequisites /restrictions approved via CUE/Faculty Senate, the department cannot prevent students from entering the Advanced Studio sequence. If the curriculum committee feels it necessary that students spend a year between 3rd year and the Advanced studio sequence completing other Architecture coursework, then a set of clearly defined prerequisites must be entered into the catalog (via Banner via CUE). This would have significant ramifications for the students (especially Honors and transfer) attracted to our B.Arch program because of the informal accelerated path available to them through taking Summer Options Studios. We had 20 students this year alone who were eligible to complete their final studio for graduation in summer 2022.

Other points of discussion by the Curriculum Committee include the development of student resources such as a common technical reference list, a common reading list, and field trips to noteworthy architecture and urban settings by faculty and students.

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

Program Response:
The undergraduate ARCH 595 Advanced Studio II & ARCH 561 Synthesis Seminar and the graduate ARCH 506G Advanced Studio II & ARCH 547G Synthesis Seminar focus on the design of a sufficiently complex architectural design project and constitute a synthetic and summative "capstone project." The School of Architecture developed these courses to address the new NAAB student criteria introduced in the 2020 Conditions to assess students' individual abilities to both "synthesize" and "integrate" an array of discrete technical, regulatory, and programmatic elements into an architectural project.

Assessment Methods & Modifications - Please see SC.5

What follows is a brief description of how the SC.6 criterion and five sub-criteria are addressed in the undergraduate and graduate curricula and how they are synthesized into a single architectural project:

Program Curricula Experience
B.Arch
ARCH 595 Advanced Architecture Studio II – This course will guide students to achieve the following competencies:

- Explore and analyze various modes of discourse related to Architectural Design. These include site documentation, architectural precedents, verbal presentations, informational diagrams, technical drawings, and analysis of technical requirements.
- Respond critically to discussions of readings, research and the development of alternative architectural designs as they pertain to the architectural project, its site and program, contextual and environmental conditions, and technical requirements.,

- Synthesize multiple design variables and architectural objectives into an independent architectural design proposal.
- Formally present an integrated architectural project including 1) Design Intent Diagrams and Statement, 2) Architectural Drawings at a minimum of four scales, 3) Exploded Axonometric Diagrams, 4) 2D and 3D Building Wall Sections, 5) Perceptual Views, 6) Building Systems Diagrams, 7) Contextual Views 8) Physical Model or Animation, 9) Summary Documentation of Design Process.

ARCH 561 Synthesis Seminar: In this course, each of the following categories, sub-list of topics and specific questions is to be researched specifically and only as it applies to the design project, site and program by a group of two students, with all sources of information noted.

Each of the following categories, sub-list of topics and specific questions is to be integrated into each student's individual design project, with detailed explanations, diagrams, charts, analytical output and proof of how each criterion is met. This portion of the work is to be accomplished by the individual student. Providing just information without evaluation and explanation is not adequate.

Building envelope and assemblies - IBC 2021 Requirements, Criteria for selection, application and design of Enclosure Systems, Thermal Insulation and Bridging Minimum Standards, Construction Sequence and Assembly, Material and Product Specification, Fire Rating of Assemblies, Water Protection, Sound Transmission and Acoustics, Integration of Mechanical
Systems.
- Does the building envelope function properly and visually enhance the design intent?
- Is the building envelope appropriate to its context, surrounding buildings, natural landscape, etc.?
- Is the building envelope appropriate to its climate, seasonal variation, weather conditions, solar access and shading, etc.?
- Is the building envelope system waterproofed, appropriately insulated and fireproofed to meet the IBC requirements?
- Is the building envelope logical, stable and buildable?
- Is the building envelope illustrated in two and three dimensions with specific and appropriate materials, assemblies and systems, at a level of detail associated with the scale 1" = 1'-0" to 1 1/2" = 1'-0", including vertical dimensions, materials specifications, from foundation to sky?
- Does the building design and detailing illustrate sufficient knowledge of the construction process?
- Overall, is the enclosure system sophisticated in concept, function, esthetics and construction?
- Does the design illustrate the selection of specific construction materials, products and assemblies which are consistent to and enhance the design concept and intent?
- Has the design characteristics been the result of research into, and evaluation of, specific construction materials and assemblies?
- Does the design illustrate a knowledge and suitable development of technical/design precedents?
- Is the design illustrated at multiple scales, including neighborhood-site, site-building, building-room, room-wall, wall-detail of assembly?

Structural systems - Criteria for selection, application and design of Foundations, Primary and Secondary Structural Systems, Load Bearing Walls / Column and Floor Design, Building Lateral Stability, Wind Loads, Deflection Limitations, Slenderness Ratios of Structural Members, Live-Dead-Wind-Earthquake Loads.
- To what degree does the structural system serve the design intent and concept?

- Is the choice of the structural form and materials consistent with other characteristics of the architecture?
- Is the structural system, all elements working together, proven to be stable, including IBC required live loads, dead loads of the proposed construction, wind loading, lateral stability and maximum deflection?
- Is the structural performance of the building proven through calculation of typical elements including foundations, load bearing walls, columns, girders, beams, slabs, frames, etc and / or comparison to similar precedents?
- Are the structural systems and members appropriately proportioned to all structural forces and spans?
- Are the structural systems and member design consistent with the structural materials selected?
- Does the structural system accommodate mechanical and other building systems?
- Is the structural system strategically integrated with the building enclosure system?
- Are the fundamental types of connections between structural elements illustrated?
- Are the structural forces and loads of the building effectively transferred to foundations and subgrade?
- Does the design illustrate an understanding of the principles of structural behavior including gravity and lateral
- forces, and the appropriate application of contemporary structural systems?
- Does the design adequately address foundation and subsoil conditions?
- Does the design clearly illustrate the overall structural system?

Environmental control systems - Criteria for selection application and design of Heating, Cooling and Ventilation Systems: System Type and Distribution, Electric Lighting, Elevators/Escalators, Plumbing Systems.

- To what degree do the mechanical systems enhance the design intent and concept?
- Are all spaces appropriately lit, heated, cooled and ventilated, by "natural and/or artificial" means?
- Are the selection and general design of the mechanical systems appropriate to the program?
- Are the mechanical systems integral to the design concept (lighting, heating, cooling, ventilation, plumbing, transportation)?
- Is the distribution and functioning of the mechanical systems logical, appropriately sized, integrated into each occupied space?
- Does the design illustrate electrical lighting and services?
- Does the design illustrate the location, appropriate size, distribution system, etc. for mechanical systems?
- Does the design illustrate appropriate acoustical performance, lighting quality, climatic modification, and minimized energy use as related to the building's envelope and function?
- What strategies of design and technology are incorporated to create a sustainable proposal, including passive and active systems, water conservation, sustainable materials, etc.?
- Does the design clearly illustrate the overall HVAC system?

Life safety systems - IBC 2021: Egress Path requirements, Maximum Travel Distances, Maximum Occupancy, Minimum Widths of Corridors & Stairs,, Min and Max Separation of fire rated Exits, Fire Suppression Systems, Fire Rated Separation requirements.
- Illustrate and prove by measurement: Does the circulation system within the building ensure safe egress, including maximum travel paths, maximum combined travel paths, maximum dead-end corridors, travel path widths based upon occupancy, required number and location of exits, minimum distance between exits, fire protection of exits and

exit paths, fire stair design including unobstructed exit widths and continuity to exit discharge?

Measurable building performance - Criteria for selection, application, design and performance of Energy Consumption, Day-lighting, Solar Protection, Natural Ventilation, Natural Cooling, Building Insulation-Thermal Mass, Building Form and Orientation, Climate, Weather and Diurnal Response, Solar Access, Natural Ventilation, Alternative Energy Sources.

- Insight Analysis must show the improvement in performance from conceptual to final design. Proof must Illustrate and describe which of Insight design variables were tested and selected, and which were most influential in the overall energy performance of the building.
- Does the proposed design illustrate and analytically prove using Insight analysis, evaluation and design modification the maximum permitted ASHRAE energy consumption, while maintaining thermal and visual comfort?
- How does the building energy use compare to the average energy use of a similar building function and location?
- Does the design minimize the use of energy consuming systems through the accurate design of solar control devices and orientations, use of natural ventilation, design for daylighting and shading systems, and use of alternative energy sources as may be appropriate?
- What is the effectiveness of day-lighting in your final design?
- How are the non-critical environmentally controlled spaces in your design cooled through natural ventilation?
- How does your design effectively control solar shading and daylighting appropriate to the building's various functions?
- Does the design meet the ASHRAE 90.1 maximum annual energy use standard?
- How close does the design meet the Architecture 2030 annual energy use standard?
- Which spaces in the design are most efficient in terms of heating and cooling loads?
- Which aspects of the architectural design are most and least efficient in terms of annual energy consumption?
- What design and technical changes were made to accomplish minimum energy requirements?

M.Arch
ARCH 506G Advanced Architecture Studio II: Because there are no differences in the collaterally agreed professional program requirements, the graduate ARCH 506G studio objectives and requirements related to SC.6 are identical to those listed above in the undergraduate ARCH 595 Advanced Architecture Studio II.

ARCH 547G Synthesis Seminar: Because there are no differences in the collaterally agreed professional program requirements, the graduate ARCH 547G seminar objectives and requirements related to SC.6 are identical to those listed above in the undergraduate ARCH 561 Synthesis Seminar.

Approach: Other Experiences
See SC.5 above.

Assessment Methods & Modifications
See SC.5 above.

Assessment Outcomes:
See SC.5 above.

4—Curricular Framework

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

4.1 Institutional Accreditation

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

Program Response:

The Middle States Commission does not send a formal letter. See screenshot below. Accreditation Status is posted on their website at https://www.msche.org/institution/0225/.

4.2 Professional Degrees and Curriculum

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

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

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

Program Response:

The B.Arch curriculum is a total of 150 credits. The following list of required courses is for the B.Arch degree program. Please see the B.Arch chart in 4.2.4 listing courses by year and by semester. Brief course descriptions for the Hillier College of Architecture and Design can be found in the University Catalog 2022-2023:
https://catalog.njit.edu/undergraduate/architecture-design/#coursestext

B.Arch	Credits
Required Professional Courses	
195 Architecture Studio I	4
110 Tools and Techniques I	3
196 Architecture Studio II	4
156 Tools and Techniques II	3
295 Architecture Studio III	4
210 History of Architecture I	3
223 Construction I	3
296 Architecture Studio IV	4
211 History of Architecture II	3
224 Construction II	3
395 Architecture Studio V	4
303 Structures I	3
309 Environmental Control Systems I	3
324 Landscape and Urbanism	3
396 Architecture Studio VI	4
304 Structures II	3
314 Environmental Control Systems II	3
495 Advanced Architecture Studio I	5
472 Professional Practice I	3
463 Options Studio I	5
475 Professional Practice II	3
595 Advanced Architecture Studio II	5
561 Synthesis Seminar	3
464 Options Studio II	5
Total required professional course credits	86

The M.Arch curriculum is a total of 90 credits (for students with a pre-professional degree in a discipline other than architecture). The following list of required courses is for the M.Arch degree program. Please see the M.Arch chart in 4.2.5 listing courses by year and by semester. Brief course descriptions for the Hillier College of Architecture and Design can be found in the University Catalog 2022-2023: https://catalog.njit.edu/graduate/architecture-design/#coursestext

M.Arch	Credits
Required Professional Courses	
501G Architecture Studio I	6
555G Tools and Techniques I	3
528G History of Architecture I	3
541G Construction I	3
502G Architecture Studio II	6
500G Tools & Techniques II	3
529G History of Architecture II	3
542G Construction II	3
503G Architecture Studio III	6
543G Environmental Control Systems I	3
545G Structures I	3
549G Landscape and Urbanism	3
504G Architecture Studio IV	6
544G Environmental Control Systems II	3
548G Structures II	3
505G Advanced Architecture Studio I	6
569G Professional Practice I	3
506G Advanced Architecture Studio II	6
547G Synthesis Seminear	3
579G Professional Practice II	3
Total required professional course credits	78

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

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

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

Program Response:

Required General Studies

HUM 101 English Composition: Writing Speaking Thinking I	3
CS 104 Computer Programming and Graphic Problems	3
MATH 107 University Mathematics A	3
HUM 102 English Composition:Writing Speaking Thinking II	3
MATH 105 Elementary Probability and Statistics	3
PHYS 102 Physics I	3
PHYS 102A Physics I Lab	1
Total required general education credits	19

B.Arch
NJIT requires 37 undergraduate credits in general education, see
https://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ for distribution and for links to course descriptions. Students in the BArch program meet this requirement with 18 Free Electives and 19 General University Requirements according to the list of general education courses and credits for BArch students in Section 4.2.4.

MSCHE, our institutional accreditor, does not have a specific number of credits required. Their language with respect to general education is in Standard III, Section 5 (https://www.msche.org/standards/#standard_3).

At NJIT, there is no maximum number of credits you can transfer as an incoming undergraduate student. However, you must earn at least 33 upper-division credits approved by the department of your major to be eligible for graduation. For more information, see Transfer Students: https://www.njit.edu/transfer-students#:~:text=At%20NJIT%2C%20there%20is%20no,to%20be%20eligible%20for%20graduation.

M.Arch
General education courses are reviewed during the admission process to confirm a domestic applicant's undergraduate transcript includes courses that will meet the NJIT requirements and determine advance standing. International students are required to submit WES evaluations of transcripts. If they do not include appropriate courses, all students are required to make up missing credits at NJIT.

4.2.3 Optional Studies. All professional degree programs must provide sufficient flexibility in the curriculum to allow students to develop additional expertise, either by taking additional courses offered in other academic units or departments, or by taking courses offered within the department offering the accredited program but outside the required professional studies curriculum. These courses may be configured in a variety of curricular structures, including elective offerings, concentrations, certificate programs, and minors.

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

Program Response:

B.Arch
Students in the B.Arch curriculum must complete 27 required Architecture Elective credits. All electives are approved and categorized in three categories by the Architecture Curriculum Committee as follows:
Technology

History Theory
General Architecture

See list of all approved Architecture Electives in Section 4.2.4.

Options within NJSoA:
- Electives (see the Fall 2022 Electives List on HCAD Advising webpage here)
- Options Studios (see the Summer 2022 Options Studios Descriptions on the HCAD Advising webpage here and the Fall 2022 Options Studio Descriptions here)
- MUD Studio - to register for the ARCH 601 Urban Design Studio, students must have a minimum 3.0 cumulative GPA and be admitted to the program (see below).

Options within HCAD:
- Electives in the School of Art and Design (see approved AD, ID, INT and DD courses on the Fall 2022 Electives List on HCAD Advising webpage here)
- Electives offered within the new School of Art and Design Online Certificate programs in Animation Essentials, Game Design and Interactivity Essentials, UI/UX Digital Design Essentials and Digital Arts Essentials (as approved by the Architecture Curriculum Committee)
- Collaborative Studios - all students (architecture, interior design, industrial design and digital design) are encouraged to register for AD 463 studios. Five spots in each studio are available to architecture students. To qualify, students must have a 3.0 cumulative GPA. See the Fall 2022 Collaborative Design Studio Descriptions on the HCAD Advising webpage here)

Options across the Institute:
Minors for B.Arch Students
B.Arch students may earn a Minor in Environmental Studies and Sustainability (ESS), providing them with interdisciplinary training to enable engagement with some of the most pressing social, ecological and technological challenges of the 21st century. The ESS Minor entails successful completion of five approved courses (15 credits) at the 300-level or higher.

An approved curricular path to obtain a Minor in ESS is provided for students majoring in architecture. It includes one required architecture course, ARCH 314 Environmental Control Systems II, typically taken in the spring semester of third year, and two required STS courses: STS 363 Introduction to Sustainability Studies and STS 364 Sustainability Policy and Practice. In addition, students must complete two architecture electives focused on sustainability, from an approved list.

Electives for B.Arch students:
B.Arch and MS in Management (The Management part of the program is in the process of being revised)
B.Arch and MS in Civil Engineering (The Civil Engineering part of the program is in the process of being revised)
B.Arch and Master in Urban Design (MUD)

NJIT's Program permits qualified NJIT undergraduate students to earn credits toward a graduate degree. To qualify, students must have a cumulative GPA at or above 3.0 and can take (6) credits of graduate coursework in their senior year. With a GPA at or above 3.5, they can take nine (9) credits.

M.Arch
Students in the M.Arch curriculum must complete 12 Architecture Elective credits.

Options within NJSoA:
- Electives (see the Fall 2022 Electives List on HCAD Advising webpage here)

Options within HCAD:
- Electives offered within the new School of Art and Design Online Certificate programs in Animation Essentials, Game Design and Interactivity Essentials, UI/UX Digital Design Essentials and Digital Arts Essentials (as approved by the Architecture Curriculum Committee)
- Depending on the courses, M.Arch students may count up to 15 credits toward an additional MS in Architecture degree, allowing them to specialize in Urbanism, Sustainability and/or Computation, or a Master in Urban Design (MUD) degree.

Options across the Institute:
M.Arch students may also add an MS in Management or an MS in Civil Engineering, using the Dual Degree Programs policy.

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

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

Program Response:

Bachelor of Science in Architecture (BS in Arch)
Master of Science in Architecture (MS in Arch)
Master of Urban Design (MUD)
Ph.D in Urban Systems (PhD)
Graduate Certificates in:
    Sustainable Building Design
    Digitally Augmented Architecture
    Sustainable Cities and Urban Ecologies
    Real Estate Design and Development
 programs:
    MArch and Master of Urban Design (MUD)
    MArch and Management (MS)
    MArch and Civil Engineering (MS)
    MArch and Master of Business Administration (MBA)

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

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

Program Response:

MSCHE does not have a minimum number of credits required for either graduate or undergraduate degrees.

See B.Arch Curriculum chart below, followed by a listing of all approved undergraduate Architecture electives.

Hillier College of Architecure & Design
Bachelor of Architecture Curriculum

Architecture Studio: 44 credits
Architecture Coursework: 69 credits
General Studies: 37 credits

General Architecture	Technology	History/Theory
AD 150 Color Theory	**ARCH 301** Digital Modeling and Fabrication	**ARCH 331** Formal Principles of Landscape Design Traditions Across the Globe
ARCH 317 Advanced Architectural Graphics	**ARCH 316** Structural Computer Applications BIM	**ARCH 332** Images of Architecture
DD 320 Robotics for Architects and Designers	**ARCH 337** Building Information Modeling	**ARCH 333** Writings on Architecture
DD 321 Interactive and Reactive Environments	**ARCH 361** Adaptive Paradigms in Architecture	**ARCH 335** Digital Tectonics
AD 325 Entrepreneurship for Designers	**ARCH 423** Advanced Construction	**INT 350** History of Furniture
DD 334 Simulated Environments	**ARCH 429** Advanced Structures	**ARCH 408** Investigations in the Contemporary Landscape
AD 340 Photography and Imaging	**ARCH 461** Resilient Structural Design and Construction	**ARCH 530** Methods of Architectural Research
ID 340 Materials and Processes	**ARCH 537** Cable and Tension Structures	**ARCH 531** History of Modern Architecture
ID 341 Sustainable Materials and Processes	**ARCH 538** Sustainable Architecture	**ARCH 533** History of American Architecture
INT 351 Furniture Design	**ARCH 541** Materials Systems in Design	**ARCH 534** Aspects of Urban and Suburban Form
ID 370 New Product Testing	**ARCH 543** Lighting	**ARCH 535** History of Architectural Ideas
ARCH 432 P3 Post Presentation Processing	**ARCH 545** Case Studies in Arch Technology	**ARCH 536** Landscape and the American Culture
DD 449 Imaginary Worlds: Arch in Motion Pictures	**ARCH 546** Designing and Optimizing the Building Envelope	**ARCH 557** Problems in Modern Housing
		ARCH 559 Social Issues in Housing
ARCH 283 Special Topics	**ARCH 483** Special Topics - Technology	**ARCH 571** Sustainable City
		ARCH 572 Mapping Urbanism
		ARCH 574 Case Studies in Community and Urban Design
		ARCH 576 Architecture of Utopia
		ARCH 583 Special Topics - History/Theory

Hillier College of Architecure & Design
Bachelor of Architecture Electives

Total Electives Required: 9 courses
Technology Electives Required: 2 courses
History/Theory Electives Required: 2 courses

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

Program Response:
See M.Arch Curriculum chart below, followed by a listing of all approved graduate Architecture electives.

Hillier College of Architecure & Design
Master of Architecture Curriculum

Architecture Studio: 36 credits
Required Architecture Coursework: 42 credits
Architecture Electives: 12 credits

Credits

| 15 | 15 | 15 | 15 | 15 | 15 | 90 Minimum Credits Required: |

Year One

Fall — ARCH 541G Construction I (3 Credits)
Spring — ARCH 542G Construction II (3 Credits)

Year Two

Fall — ARCH 549G Landscape and Urbanism (3 credits)
Spring — Architectural Elective (History/Theory or Technology) (3 credits)

Year Three

Fall — Architectural Elective (History/Theory or Technology) (3 credits)
Spring — Architectural Elective (History/Theory or Technology) (3 credits)

15 credits

ARCH 528G History of Architecture I (3 Credits)
ARCH 529G History of Architecture II (3 Credits)
ARCH 545G Structures I (3 credits)
ARCH 548G Structures II (3 Credits)
Architectural Elective (History/Theory or Technology) (3 credits)
ARCH 547G Synthesis Seminar (3 Credits)

ARCH 555G Tools and Techniques I (3 Credits)
ARCH 500G Tools and Techniques II (3 Credits)
ARCH 543G Environmental Control Systems I (3 Credits)
ARCH 544G Environmental Control Systems II (3 Credits)
ARCH 569G Professional Practice I (3 Credits)
ARCH 579G Professional Practice II (3 Credits)

ARCH 501G Architecture Studio I (6 Credits)
ARCH 502G Architecture Studio II (6 Credits)
ARCH 503G Architecture Studio III (6 Credits)
ARCH 504G Architecture Studio IV (6 Credits)
ARCH 505G Advanced Architecture Studio I (6 Credits)
ARCH 506G Advanced Architecture Studio II (6 Credits)

| Fall | Spring | Fall | Spring | Fall | Spring |
| Year One | | Year Two | | Year Three | |

General Architecture

ARCH 622
Life Cycle Assessment and Design

ARCH 647
Visualizing Urbanism

ARCH 651
Public and Private Development

ARCH 654
Land Remediation and Community Revitalization

ARCH 655
Land Use Planning

ARCH 679
Envisioning Newark

ARCH 684
Topics of Sustainable Urbanism

ARCH 688
The Augmented City

DD 640
UI/UX in Digital Design

DD634
Physical Computing for Design - Interaction Design

IS 661
User Experience Design

FIN 600
Corporate Finance I

FIN 661
Introduction to Topics in Fin Tech

Technology

ARCH 677
Geographic Information Systems

ARCH 621
Net Zero Building Design

ARCH 623
Building Energy Modeling for Sustainable Design

ARCH 625
Passive House and Beyond

ARCH 626
Building Dynamics

ARCH 689
AI / VR in Architecture

ARCH 645
Case Studies in Architectural Technology

ARCH 646
Designing and Optimizing the Building Enclosure

History/Theory

ARCH 636
History and Theory of Urban Planning and Design

ARCH 630
Critical Theories in Architecture

ARCH 634
Urban Theory and the Contemporary City

ARCH 672
Architecture and Social Change

ARCH 662
Special Topics in Architecture

NJIT
New Jersey Institute of Technology

Hillier College of Architecure & Design
Master of Architecture Electives
Total electives required: 4 courses

Certificates and Concentrations

MUD Core	4

MUD Elective & MSArch Elective & Sustainable Cities and Urban Ecologies Certificate	5	**Sustainability Concentration & Sustainable Building Design Certificate**	6
Real Estate Design and Development Certificate	7	**Computation Concentration & Digitally Augmented Architecture Certificate**	6

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

credits for general studies and for optional studies, and the total number of credits for the degree.

Program Response:

Not applicable.

4.3 Evaluation of Preparatory Education

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

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

See also Condition 6.5

Program Response:

B.Arch
The HCAD Advisors and Program Coordinators utilize a Transfer Credit Evaluation spreadsheet. Students upload relevant course syllabi to a Google Drive folder for review by Mark Bess, B.Arch and B.S.Arch Program Coordinator. Transfer students are also required to submit a portfolio.

Transfer equivalencies for seven local community colleges are outlined on the HCAD Transfer Equivalencies 2021 spreadsheet link:
https://drive.google.com/file/d/11Wou7dS_KopgOCIjjotmSfbuQkE5I3jk/view?usp=sharing
This is an internal document only, not an articulation agreement. The same process is used for students from other schools.

M.Arch
Advanced Standing
The HCAD Advisor for graduate students and M.Arch and M.S.Arch Program Coordinator Gernot Riether utilize a M.Arch Advanced Standing Google Form which states,

"With an undergraduate degree in Architecture, Interior Design, Landscape Architecture, or similar, you may qualify for an advanced standing in our program. For us to determine the standing in our program please use this form to specify which courses you already took in your undergraduate degree that you think match the content of our M Arch courses. (Studios are not part of this list as studio placement will be based on the portfolio and transcript that you already submitted when you applied) Please submit this form by July 1, 2022 to allow for enough time for faculty to review your material and for us to place you in the program before the Fall semester. You can find a more detailed description of all NJIT courses here: https://catalog.njit.edu/graduate/architecture-design/architecture/march/

Students upload relevant course syllabi to this Google Drive folder for review by the relevant faculty for all required allied courses as follows:
Gabrielle Esperdy: History of Architecture
Mark Bess: Construction
Rima Taher: Structures

Hyojin Kim: Environmental Control Systems
Darius Sollohub: Professional Practice

Students are also required to submit a portfolio with their application.
Students with advanced standing have second year studio placement with six courses that
they received advanced standing for which translates into a 60 credit "track" and a semester
course load of 15 credits.

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

Program Response:

There are no standing arrangements with other schools for curricula that meet NAAB criteria.
Every student is admitted based on individual application materials reviewed by the
appropriate faculty to determine compliance with NAAB criteria.

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

Program Response:

NJIT employs rolling admissions. Dates and deadlines of all admissions reviews are outlined
on the Admissions page here: https://www.njit.edu/dates-and-deadlines

General University Requirements are automatically transferred according to agreed-upon
equivalences and information is available to current and prospective students at NJ Transfer
website https://www.njtransfer.org/.

B.Arch
Please see Section 6.5 for the process for admitted B.Arch students. Access will be provided
to student admissions files as required.

Admissions and Portfolio Requirements for all applicants to the Hillier College are outlined on
the College webpage here: https://design.njit.edu/admission-and-portfolio-requirements

M.Arch
Please see Section 6.5 for the process for admitted M.Arch students. Access will be provided
to student admissions files as required.

Admissions requirements for graduate students are outlined on the Admissions webpage
here: https://www.njit.edu/admissions/masters-programs

M.Arch students are directed to the Admitted M.Arch Student link on the HCAD Advising
webpage here: https://design.njit.edu/admitted-m-arch-students
This outlines the M.Arch Application for Advanced Standing, the M.Arch Application for
Graduate Teaching Assistantships, and the M.Arch and M.S.Arch Computer Requirements.

Upon admission, B.Arch and M.Arch students do not have any financial obligation to the
institution until after they have access to their degree path. Students are charged for the first

semester once they enroll in classes. Those who decide not to enroll in classes for any reason forfeit only a nominal deposit.

5—Resources

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

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

Program Response:

NJIT
For information on the comprehensive administrative structure of the University see the website link here: NJIT ORGANIZATION & GOVERNANCE.

HCAD
HCAD is led by Interim Dean Gabrielle Esperdy, assisted by Associate Dean for Research Deane Evans and Associate Dean for Academic Affairs, John Cays. The New Jersey School of Architecture (NJSoA) and the School of Art and Design (A+D) are the two disciplinary divisions of the HCAD. The staff in the College support all the academic programs offered by the two Schools. All staff report to the Director of Administration, Tracy MacDonald. Each School is led by a faculty member who is chosen at the discretion of the Dean to serve as Director (with a $10,000 stipend over the course of each academic year plus one full month to be paid each summer, and a 50% teaching load).

HCAD Ancillary Services
IT - NJIT is a computing-intensive university. HCAD benefits from having three IT staff with offices in the building. They report to NJIT Information Services and Technology (IST).

Littman Library - HCAD is home to the Littman Library, a division of the Van Houten Library, NJIT's university library.The Littman Library is led by Director Maya Gervits.

NJSoA
The Interim Director of the School of Architecture is Professor Darius Sollohub, who oversees six degree programs. The Director is assisted by faculty Program Coordinators.

In fall of 2021, a structure was implemented in the NJSoA (with A+D as a precedent) whereby faculty program coordinators were selected to provide assistance to the Director by overseeing one-to-two academic degree programs. In exchange, Program Coordinators receive a 3-credit course release.

Program Coordinators include University Lecturer Mark Bess (Bachelor of Architecture and Bachelor of Science in Architecture), Associate Professor Gernot Riether (Master of Architecture and the Master of Science in Architecture degree programs), Professor Georgeen Theodore (Master of Urban Design program) and Associate Professor Hyojin Kim (PhD in Urban Systems Program). Program coordinators assist with student recruitment and admissions coordination, pre-preparatory evaluation (transfer students and M.Arch), teaching assistantship assignments (M.Arch), and curricular development and initiatives.

School of Art and Design (A+D)
The Interim Director of the School of Art and Design is Associate Professor Martina Decker. Program Coordinators include University Lecturer David Brothers (Interior Design), Jose Alcala (Industrial Design) and Glenn Goldman (Digital Design).

Hillier College of Architecture & Design
Organizational Chart

Gabrielle Esperdy — Dean

John Cays — Associate Dean for Academic Affairs

Sasha Corchado — Senior Academic Advisor

Esi Sapara-Grant — Academic Advisor

Deane Evans — Associate Dean for Research and Director, Center for Building Knowledge and Center for Resilient Design

Colette Santasieri — Director, Center for Community Systems

Christine Liaukus — Housing and Community Development Program Manager

Terra Meierdierck — Outreach Program Manager

Victoria Dollon — Project Assistant

Richard Baldwin — Technical Consultant

IT Support

Mike Kehoe — Manager, Emerging Technologies

Richard O'Brien — Technology Integration Engineer

Manny Rodriguez — User Services Support Specialist

Library Staff

Maya Gervits — Director of Arch Library

Kennedy Jones — Arch, Art, and Design Librarian

Cherron Bradshaw — Library Assistant

Tracy MacDonald — Director of Administration

Amada Belton — Office Coordinator

Vesna Veljasevic — Communications Coordinator

Stacy Weglein — Administrative Assistant I

Samanthea Jones — Administrative Assistant II

Allison Lim — Student Engagment Coordinator

TBD — Fabrication Manager

Daniel Hayden — Fabrication Manager

Darius Sollohub — Interim Director, Architecture

Faculty, University Lecturers, and Adjunct Instructors

Martina Decker — Interim Director, Art & Design

Mark Bess — Program Coordinator, B. Arch & B.S. Arch

Gernot Riether — Program Coordinator, M. Arch & M.S. Arch

Georgeen Theodore — Program Coordinator, MUD

Hyojin Kim — Program Coordinator, Urban Systems & PhD

Jose Alcala — Program Coordinator, Industrial Design

David Brothers — Program Coordinator, Interior Design

Glenn Goldman — Program Coordinator, Digital Design

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

Program Response:

NJIT
The NJIT Faculty Handbook outlines the university administration and shared governance, the faculty and instructional staff, the academic units and the administration, promotion and tenure, teaching, faculty development, and the role of the faculty in selecting and evaluating administrators. See the document here.

Faculty have governance participation available through the Faculty Senate, reporting to the Provost. The link to Standing Committees is here:
https://www5.njit.edu/facultysenate/committees/standing-committees/

The Faculty Senate meets twice per month.
Institute Faculty Meetings are held twice per semester.
The meeting schedule for 2022 – 2023 is outlined here:
https://www5.njit.edu/facultysenate/meeting-dates.php
The agenda and minutes for Institute meetings from 2014 – present are archived here:
https://www5.njit.edu/facultysenate/meeting-dates.php

The University Senate is responsible for conducting business relating to the welfare and improvement of the university exclusive of academic and faculty matters, which are under the purview of the Faculty Senate. For more information see:
https://www5.njit.edu/universitysenate/)

The Lecturer's and Educator's Congress (LEC) represents Instructional Staff (i.e. University Lectures) in shared governance at NJIT. For more information see:
here:https://www.njit.edu/lec/members

Students have representation in a Student Senate: http://www.njitstudentsenate.org/
Graduate students can take part in the Graduate Student Association:
https://www.gsanjit.com/. Both student organizations have access to the Office of the President, according to the NJIT Organization and Governance Charts:
https://www.njit.edu/oie/sites/njit.edu.oie/files/njit_orgchart.pdf

Faculty, staff, and graduate students all have opportunities to affect their working conditions through various union contracts, here: https://hr.njit.edu/union-contracts

HCAD
The HCAD Bylaws, approved by the College of Architecture and Design on March 8, 2017, are available here. This document outlines faculty governance, the organization of the College, the voting membership, the administrative structure, rules for conduct at the college faculty meetings, college committees and emeriti status.

Assuring Continuity and Stability
At the college level, the Associate Dean for Academic Affairs and the Director of Administration provide consistent applied vision towards administering the college goals. The role of the Director to manage teaching and administrative duties at the school level assures that a consistent vision is applied to all programs. The Coordinators for each program

disseminate the vision of the college and school in the day-to-day education and artistic growth of the student body. Sasha Corchado, Senior Academic Advisor in the College, also works to maintain consistent vision and guidance of student progress through the school. The close collaboration of Director, Coordinators and Advisors assure consistent and continuous management of the Architecture programs.

Communication among all components of the unit
HCAD faculty meetings are held multiple times each semester. NJSoA faculty meetings are held every month. These meetings are opportunities to communicate among the entire faculty. Administrative staff, including the Associate Dean for Academic Affairs John Cays, the Interim Director of the School of Architecture Darius Sollohub, Associate Dean for Research, Deane Evans, and Director of Administration, Tracy MacDonald meet weekly with Interim Dean Gabrielle Esperdy to discuss matters of consequence to the College. In addition to these formal meetings, the Architecture Director, Coordinators and Advisors regularly communicate in person and via email. Coordinated studio class meetings for both undergraduate and graduate students on Mondays and Thursdays provide consistent opportunities to gather for informal meetings.

Time and staff to execute administrative and/or teaching duties effectively
Administration of the NJSoA depends on close collaboration between the Director, Senior Advisor, Sasha Corchado, and Advisor Esi Sapara-Grant, and the Coordinators. These administrators work on a daily basis with the Dean and Associate Dean to manage College and School level administration.

5.2 Planning and Assessment

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

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

Program Response:

Goals in the NJIT 2025 Strategic Plan addressed in NJSoA's multi-year strategic objectives:
● Increase enrollment
● Maintain R1 research status
● Maintain high graduation and retention rates
● Continue to increase diversity among faculty, students, and staff

Goals in HCAD planning addressed in NJSoA's multi-year strategic objectives
● Leverage resources and context to increase diversity, i.e. NDC and other local partnerships
● Complete searches for administrative positions within two years
● Support the NJIT 2025 Strategic Plan

Multi-year objectives in NJSoA's strategic planning
● Conclude Strategic Planning Process paused by the pandemic
● Continue to respond to the not met and causes of concern comments from the previous Visiting Team Report
● Continue adaptation to the NAAB Conditions: measurability in SC.5 and SC.6; Shared Values; Diversity, equity, and inclusion; Teaching/learning culture policy; Planning and assessment activities.

5.2.2 Key performance indicators used by the unit and the institution

Program Response:

There is no university requirement for an annual report from the school or college (the NAAB ARS functions as the annual program report and the APR functions as the).

KPIs for the School are the statistical items listed in the Annual Report Submissions (ARS) to the NAAB, see the HCAD Accreditation webpage here: https://design.njit.edu/accreditations
KPIs for NJIT are published at the end of the NJIT 2025 Strategic Plan, available here: https://www.njit.edu/strategicplan/sites/njit.edu.strategicplan/files/Strategic%20Plan%2010.1.21.pdf
A set of spreadsheets focused on demographics and diversity with numbers from 2014 through 2021 for: 1) Entering Students; 2) Total Enrollment; 3) Degrees Awarded; 4) Full-Time Faculty; 5) Part-Time Faculty; and 6) Adjunct Faculty, will assist the College with the further assessment of the numbers of diverse students and faculty. See the HCAD Demographic KPI's here:
https://docs.google.com/spreadsheets/d/1IgS6pIo2i8X2xuiyy9SBVosTskpC3bMW/edit?usp=sharing&ouid=103460003207141630893&rtpof=true&sd=true

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

Program Response:

The College began working with the Intersol Group in May of 2021 to develop the College's 2025 Strategic Plan. A second workshop was held in August of 2021. All faculty and staff were invited to the workshops which focused on reviewing the vision and mission for HCAD and reviewing and updating the goals and objectives of the strategies, developing tactics in order to achieve the objectives as well as to identify outcomes and measures of progress for these tactics. This plan builds on earlier strategic plans that guided the NJSoA, including "Key Points for a Future Strategic Plan for the College of Architecture and Design 2010-2015" and "Plan to Achieve National Prominence by the The New Jersey School of Architecture, October 2003." Draft 2 of the HCAD Strategic Plan 2025 is available here.

The 4 goals currently identified include:
● Increase impact and efficacy
● Addressing societal challenges and opportunities
● Advance Our Stature
● Promote and enable inclusivity and diversity

For each goal, initial tactics have been identified to achieve the objectives. For each tactic, desired outcomes have been identified, as well as potential measures of progress. The Interim Dean and Directors will be leading the process to complete the Strategic Plan this coming academic year.

Consistent evaluation of the KPI's in the NAAB ARS reports–which have significant overlap with the NJIT Strategic Plan–will show consistent progress toward achieving the mission and goals over the years.

Given the vision for the NJSoA–Our goal is to produce creative thinkers, competent professionals, and engaged citizens who will meet their ethical responsibilities to the environment and to the society in which we live–examples of success are evident in the long-term commitment of tenured faculty to consistent goals:

- The launch of the Newark Design Collaborative - Increasing impact and efficacy through community engagement and collaboration. This initiative is led by Professors Tony Schuman, Darius Sollohub and Georgeen Theodore. (See Shared Values: Leadership, Collaboration, and Community Engagement)
- Students who won the ACSA Timber in the City 2022 design competition - Advancing our stature and Addressing societal challenges and opportunities through sustainable design excellence. This initiative was led by long-term adjunct instructor Caroline Grieco, with technology support by the IT staff within HCAD and Associate Dean John Cays.
- Orange High School program - Promoting and enabling inclusivity and diversity by increasing the percentage of African American students. This initiative is led by Associate Dean John Cays and University Lecturer Mark Bess. See more information in Section 2 Equity, Diversity, and Inclusion.

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

Program Response:

Strengths:
- Urban context and the community connections developed over 50 years
- Recruiting coordination and strategic advertising that reversed enrollment decline
- A long tradition of computing sophistication permeating the curriculum
- Position within an R-1 STEM research university
- Best retention rates at NJIT based on successful summer remediation courses and other measures
- High number of transfer students using the accelerated B.Arch path of 4.5 years including two summer semesters
- Kepler, the College's digital curricular assessment system and repository, has been completely revamped for improved useability and access and is now available through Canvas
- Access to the NY/NJ metropolitan labor pool for quality practitioner instructors

Challenges:
- Providing necessary instructional spaces, especially for studios, consistent with increased enrollment goals
- Recruiting and retaining a diverse faculty, e.g. the recent decrease of four female faculty members, including one African-American, due to retirement and departure
- Meeting student desire for flexibility through online courses, both synchronous and asynchronous
- Reversing low ARE pass rates
- Maintaining focus on long range planning to continuously improve learning outcomes and student success

Opportunities:
- Use the College's administrative shift to academic departments with elected chairs to improve administrative responsiveness, better faculty governance, and bolster curricular quality
- Right-size instructional square footage with the number of students to address the studio workplaces of the 21st-century
- Use new faculty lines to fill instructional gaps and satisfy emerging research needs while also increasing diversity
- Assess alternative course delivery methods that emerged during the pandemic for future applications in distance learning classes and hybrid degree programs

- Seat a permanent dean who can effectively lead the faculty after a period of administrative discontinuity and the disruption of the pandemic
- Locate the Newark Design Collaborative in a highly trafficked Newark location to support HCAD's community interactions
- Develop connections with high schools in Newark and nearby communities to serve a more student body diversity
- Embrace HCAD's 50th Anniversary celebration for development and to assess the college's impact as it prepares for the next half century
- Assess the effectiveness of the 2019 Curricular restructuring on learning outcomes, especially as they relate to low ARE pass rates, and on opportunities to integrate IPAL

5.2.5 Ongoing outside input from others, including practitioners.

Program Response:
• The processes used to obtain and make improvements to the program as a result of external input
• Inputs from stakeholders (students, university community, the public)

Program and Curricular Review
- Students submit course evaluations each semester.
- The College Advisory Board and the Executive Council are both made up of alumni. See more information on our Alumni webpage here.

Architectural Design Review
- An informal way to gather feedback from alumni is the Design Showcase event, an annual exhibition of architecture and design excellence produced by the students and alumni of the Hillier College of Architecture and Design. The evening starts with dedicated professional networking time for alumni, sponsors, and industry professionals. The event continues with a lecture in our Alumni Lecture Hall. The evening concludes with a reception, viewing of the gallery exhibition, and the announcement of the student design competition. While this is primarily a networking event for alumni, it is also an opportunity for them to recruit employees; many of the high performing students who are selected to participate in the exhibition are provided with summer job offers. See the 2022 Design Showcase catalog here.
- Final Review Posters w/all external critics listed, see here.
- Super Jury Posters w/invited critics listed, see here.
- Students are invited by the AIA Newark and Suburban to take part in the annual AIA Awards.

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

Program Response:

Middle States
The results of self assessment from Middle States (8-year terms of accreditation) regularly supports student and faculty success as outlined as objectives in the NJIT Strategic Plan 2025. The Middle States self-assessment at the University and constituent College levels was a robust and top/down bottom/up process. The process is outlined here: https://www.njit.edu/oie/self-study-design, and the Middle States Assessment page is here: https://www.njit.edu/oie/assessment.

HCAD Self Assessments

The College is reviewed regularly by NASAD (interior design, industrial design and digital design) and CIDA (interior design) and NAAB (architecture). See the HCAD Accreditation page here.

An example of student success, promoted by changes and adjustments as a result of self-assessments, are retention rates of our College, as compared to other colleges in the university. According to a chart titled Undergraduate Retention Rate: Fall 2020 to Spring 2021, "Overall, HCAD has the highest retention rate from Fall 2020 to Spring 2021 (84%)." See chart here. According to the NJIT Institutional Profile 2021, "The one-year retention rate of first-time, full-time freshmen (fall 2020 cohort) is 89%, and the six-year graduation rate has increased by 3% to a total of 70% for the fall 2014 cohort."

For changes addressing the 2014 Visiting Team Report please see the Introduction.

HCAD and NJSoA Assessment Tools

The current assessment tools implemented and utilized to assess and advance the B.Arch and M.Arch programs include:

- Kepler - All student creative work, including the output from final semester studios is stored on the Kepler Online Student Assessment system. Kepler System is a curriculum management and digital information storage and retrieval system accessible through Canvas. Each semester, the Kepler System stores all the work of each student in the College and makes it available to all HCAD students, instructors, and administrators. Kepler was cited positively in the recent Middle States report.
- the NAAB matrix and the criteria assigned to each course in the B.Arch and M.Arch program
- the B.Arch and M.Arch Studio Curriculum charts, which provide studio faculty coordinators with the ability to advance the studio sequence in the B.Arch and M.Arch programs and are shared and updated each semester
- the Faculty Course Self Assessments, Google forms for each course that requires faculty to set a benchmark, and invite peer feedback (in lieu of a college assessment committee). See link here.
- AIAS end of the year student survey further developed by the Director, Front Desk Staff, Advisors and Librarian this past year.

5.3 Curricular Development

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

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

Program Response:

Curricular Assessments and Adjustments

Tasks are done by a combination of persons assigned and/or volunteers. Curricular modification rules are established by the faculty at the university level. All curricular changes are discussed by faculty and go through various approvals – starting with the Architecture Curriculum Committee and/or School Director, the Dean of the College, a vote of the HCAD faculty, approval by the University Committee on Undergraduate Education (CUE) or the NJIT Committee on Graduate Education, which are faculty committees reporting to the Provost.

All new courses must be approved by this process and the general procedure is to have faculty who teach or may teach a course prepare the required documentation and take the lead in any discussion about the course. This process is assisted by the Director and/or the Student Advisors to the NJSoA.

Although the university generally relegates curricular responsibility to tenure and tenure track faculty, the Hillier College of Architecture and Design – and specifically the NJSoA– includes all members of the instructional staff (adjuncts and lecturers) as full participants in curricular and pedagogical discussions and decision-making processes. University Lecturers are, in fact, required in HCAD to participate fully in these activities and adjuncts are permitted and welcomed as their professional schedules allow and to the extent they wish to participate. There are no exclusions in HCAD.

Most work is accomplished in Architecture by those individuals directly affected. The Coordinators take on a variety of roles that are program-specific, and the Director generally oversees school-wide issues. Faculty who are particularly interested in working on a specific issue are usually welcomed to do so and their efforts are appreciated by others. There are more than enough tasks and issues to go around so that contributions to the collective are needed and encouraged from everyone in the Architecture community.

Different aspects of the curriculum are reviewed periodically at the following meetings and events:

- Faculty meetings
- Curriculum Committee meetings
- Studio Coordinator meetings
- Biweekly meetings of the Director and Program Coordinators
- Super Jury, held every semester

In addition, course self-assessment forms and student course evaluations are evaluated by the Director every semester.

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

Program Response:

Course assessment by students, faculty and administrators happens on a regular cycle (see Section 5.3.2) and the NAAB Conditions and Student Criteria are reviewed as part of the process. Changes to the curriculum are related to the goals of the NJIT 2025 Strategic Plan, the HCAD Strategic Plan and input from outside the University.

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

Program Response:

NJSoA Syllabus Instructions are sent to all faculty prior to the semester, which include guidance on how course learning outcomes must be tied specifically to NAAB criteria as per the newly revised NAAB assessment culture standards for required and elective courses (sample language and instructions are provided).

The instructions outline that learning objectives or outcomes should explicitly state a course's goals for student learning. They should reflect the knowledge and skills that students obtain in the course. Each NAAB criterion achieved in the course should be linked directly to a learning objective. (Note: Syllabi should include action verbs that range from "remember" to "create" (i.e. less to more complex). Bloom's Revised Taxonomy is a good resource for this range.)

HCAD Curricular Assessment Process

Provost	reviews proposals for appropriate level of scholarship and supports the NJIT Strategic Plan
HCAD Dean	reviews proposals for HCAD strategic planning, academic scholarship, professional fit
Associate Dean for Academic Affairs	reviews proposals for procedural correctness, leads discussion with appropriate offices across the University
Director	reviews proposals for NJSoA strategic planning, leads discussion at faculty meetings for a vote, and submits proposals
Program Coordinators	focuses discussions
Faculty	Curriculum Committee for the School of Architecture bring concerns to the table, works for consensus
Visiting Critics	bring experience from practice and from other educational institutions, complete rubrics, offer grade suggestions for studio projects, provide feedback,
Students	share experience in courses with direct experience of faculty through course evaluations
Alumni and/or Employers	share strengths and challenges with recent hires from the programs
Advisory Board members	give advice and feedback to the Dean of HCAD on curricular change proposals

Curriculum Committee

NJSOA Curriculum Committee works cooperatively with the administration to make recommendations for the development of the curriculum and advises on other academic matters. The committee includes a balance of elected members and those serving as coordinators of studio years and degree programs. The committee addresses relevant issues involving pedagogical structure and educational goals, as well as how courses meet student learning objectives. The committee meets monthly during the Academic Year.

Curriculum Committee Members 2021 – 2022, assigned according to HCAD Bylaws

Tom Ogorzalek First Year Studios / T-T Coordinator
Maria Hurtado de Mendoza Second Year Studios Coordinator
Vera Parlac Third Year Studios Coordinator
Stephen Zdepski Advanced Studios I – II & Seminar Coordinator
Gernot Reither M. Arch Coordinator
Gabrielle Esperdy Architectural History
Mark Bess Building Technology / B. Arch Coordinator
Georgeen Theodore At-Large (for Tom Navin)
Cleve Harp At-Large
Kelly Hutzell Director NJSOA

5.4 Human Resources and Human Resource Development

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

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

Program Response:

Faculty Loads

The full-time faculty load includes one studio (4 – 6 credits) and one lecture or elective course (3 credits) each semester. Large lecture course enrollments are factored into the teaching load by a multiplier: for 50 students enrolled, the multiplier is 1.5; for 75 students enrolled the multiplier is 1.75, for 100 or more students enrolled the multiplier is 2.

Three-credit course releases are currently provided to studio year coordinators, Program Coordinators, faculty with a significant University service responsibility (e.g. Chair of University P & T Committee), those with funded research (Principal PI and $75,000), and/or those that conduct PhD advising of two students.

A University Lecturer is required to teach 24 credits an academic year. Typically, University Lecturers are not required to do service. In HCAD, the majority of Program Coordinators are University Lectures who receive a three-credit course release.

Adjunct faculty can teach up to 7 credits per semester, but cannot exceed 30 contact hours and cannot be required to be on campus more than three days per week.

Policy Documents

The Teaching Assignment Criteria (TAC) is a document under review by HCAD faculty to assure that it addressed issues related to creative practice as research.

The PSA/AAUP Union contract representing faculty and all professional staff with greater than a 60% workload: https://hr.njit.edu/sites/hr/files/PSA-Contract-2015-2019-FINAL-toc2.pdf

Promotion and Tenure guidelines are outlined here: https://www.njit.edu/provost/promotion-and-tenure

The United Council of Academics at NJIT (UCAN) represents all Graduate Student Teaching Assistants, Graduate Student Research Assistants, full-time research staff and Adjuncts: https://hr.njit.edu/sites/hr/files/PSA-Contract-2015-2019-FINAL-toc2.pdf

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

Program Response:

HCAD has assigned Mark Bess, AIA, NOMA, NCARB, as the Architect Licensing Advisor for NCARB and its AXP program. In addition to serving as HCAD's B.Arch coordinator, he is actively involved with NCARB, having participated on ARE 4.0 test review and 5.0 test creation committees. Mark is also a board member of the NJ Chapter of the Constructions Specification Institute (CSI) and works with the local AIA Newark and Suburban Chapter as an Education Liaison. Mark helped found the NJ Chapter of NOMA and is HCAD's NOMAS advisor, he also mentors current and former students as they enter their careers.

In the role as the Architect Licensing Advisor, Mark has attended all the training events held by NCARB, developed on-going seminar sessions for the student body introducing the path towards licensure and the AXP program, ARE and NCARB certification. These sessions are supplemented by engagement with student run organizations including AIAS and NOMAS as well as representatives from NCARB. Mark is assisting students with gaining AXP Experience and is currently working with NCARB to get the school's 503(c)(3) Freedom by Design organization pre-approved as a community-based design center. This will allow students who volunteer with Freedom by Design on specific projects to obtain AXP experience.

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

Program Response:
NJIT has recently partnered with LinkedIn to provide faculty and staff with LinkedIn Learning courses related to their career interests.

The NJIT Faculty Handbook outlines Faculty Development in Chapter 6, including Research Support, Faculty Mentoring, Participation in Professional and Learned Societies and Conferences, Publication Assistance and Sabbatical Leaves. For detailed information see the Faculty Handbook here: https://www5.njit.edu/facultysenate/faculty-handbook/

All new faculty are invited to participate in the New Faculty Development Workshop, a series of sessions for newly hired tenure-track faculty members which provides resources and guidance to succeed in their academic careers.

New faculty have access to startup research funding. NJIT Tenure/Tenure Track Faculty Startup Fund Compliance Guidelines, see webpage here: https://www5.njit.edu/policies/sites/policies/files/Start%20Up%20Fund%20Guidlines.pdf

The Institute for Teaching Excellence (ITE) strives to foster teaching excellence at all levels for faculty, lecturers, adjunct instructors, and graduate students by providing a number of programs that promote the use of state-of-the-art pedagogical and technological methods in teaching. More information can be found here: https://www.njit.edu/ite/

For an example of how faculty development contributes to program improvement, Associate Professor Hyojin Kim is a Guest Researcher at the National Institute of Standards and Technology (NIST) where she has collaborated with researchers since 2017. Her current project uses their Net-Zero Energy Residential Test Facility (NZERTF) to empirically validate building energy simulation software developed by U.S. DOE (i.e. Energy Plus). This is a multi-year project, and of the five "performers" NJIT is the only academic institution.

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

Program Response:
There are now two academic advisors for undergraduate students. One, the Senior Academic Advisor, also serves as the academic advisor for graduate students (see details in the response to conditions not met in the 2014 Visiting Team Report at the beginning of this document). And, also noted above, we now hold weekly advising meetings of the Associate Dean, Directors, Advisors, and Assistant to the Dean (who is responsible for all technical aspects related to scheduling). Additional resources for students are available on the College Academic Advising webpage.

Personal counseling, advising, and support for mental well-being is available to all NJIT students. The mission of the Counseling office begins "The NJIT Center for Counseling and Psychological Services (C-CAPS) is committed to assisting students in the achievement of their academic goals as well as benefiting from their personal experience on campus." Further information is at their webpage, https://www.njit.edu/counseling/

The Diversity and Inclusion programs (https://www.njit.edu/diversityprograms/) also offer support particularly for issues of identity.

Career Development Services (CDS) assists NJIT students and graduates with career guidance and preparation virtually and on-campus. The staff review and critique resumes and assist with co-op and internship placements. CDS organizes a fall and spring career fairs in addition to hosting employer virtual recruiting visits. The spring 2022 career fair included nearly 30 architecture firms, including Genser, Perkins Eastman and Beyer Blinder Belle. Handshake is NJIT's online hub for career services and includes internship and job listings for both students and employers.

The CDS focuses not only on student and employer engagement but also community engagement. CDS community engagement activities for students include community service hours, tutoring for Newark students and service learning hours. CDS - By the Numbers AY

2021 – 22 is available here:
https://www.njit.edu/careerservices/sites/njit.edu.careerservices/files/CDSNumbers.pdf

Patrick Young is the Associate Director of Employer Relations and Deborah Sims is the Career Advisor for HCAD.

Please see Section 5.4.2 of this APR for a description of the career guidance available through the initiatives of the ELA, Professor Mark Bess.

The Littman Library also hosts events throughout the year that provide career guidance such as Tea with Alumni, and ARE career preparation workshops.

5.5 Social Equity, Diversity, and Inclusion

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

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

Program Response:

NJIT supports diversity and inclusion across the University. An Associate Director for Diversity and Inclusion and the Director of Student Life lead this effort. Diversity and Inclusion programs, a Diversity Dialogue Series, Identity-Based Campus Clubs and Organizations, LGBTQA+ Resources and the University Non-Discrimination Policy are outlined on the University website here: https://www.njit.edu/diversityprograms/meet-staff

Human Resources
Human resources committed to minority representation in the HCAD include staff lines filled as advisors and administrators, faculty positions as program coordinators, tenured and untenured faculty, and library staff.

The HCAD Gallery hosts two exhibitions each year which are free and open to the public, curated by Matt Gosser, NJIT alumnus, adjunct faculty member, and Newark resident.

The annual Lecture Series is held in the Alumni Lecture Hall on the first floor and provides AIA credit and is also free and open to the general public.

Financial resources
The fall Awards Ceremony is a time to celebrate our students with scholarships. Examples include the Janet McIntosh Riley Scholarship which is awarded to an undergraduate African-American student whose interest is to pursue studies in architecture or engineering, and the Dana Koenitzer Scholarship, which is awarded to a full-time undergraduate female student.

For a full listing of all undergraduate and graduate NJSoA Scholarships in Fall 2022, see:
https://drive.google.com/file/d/1N42erM8rYhHH36-xgVQABnUIg4bxStHy/view?usp=sharing
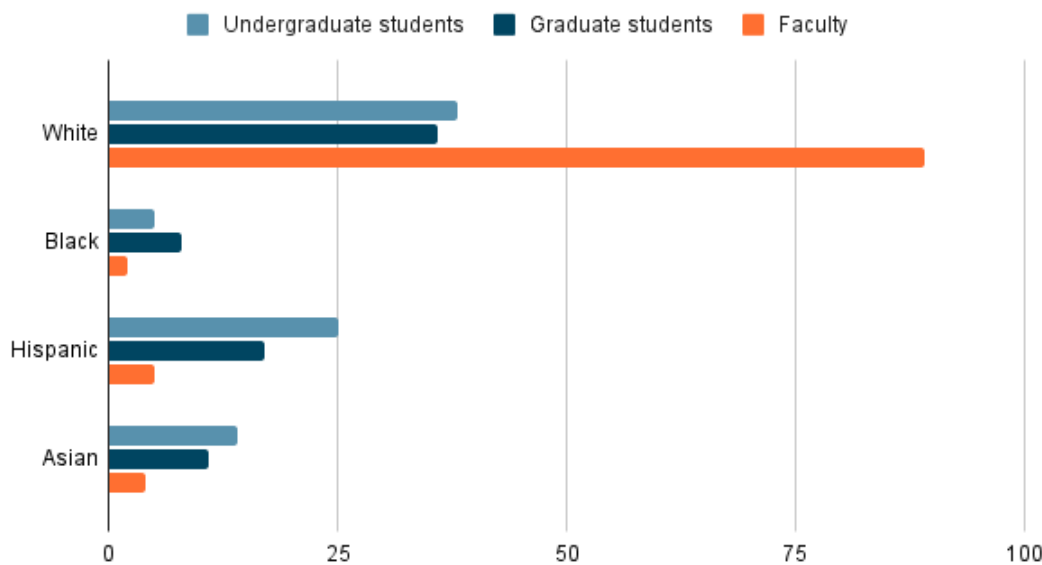
5.5.2 Describe its plan for maintaining or increasing the diversity of its faculty and staff since the last accreditation cycle, how it has implemented the plan, and what it intends to do during the next accreditation cycle. Also, compare the program's faculty and staff demographics with that of the program's students and other benchmarks the program deems relevant.

Program Response:

The NJIT Faculty Search and Selection Guidelines: Hiring for Inclusive Excellence guides all faculty searches. The document, last updated in September 2021, states "The Faculty Search and Selection Guidelines document is structured to help you be proactive as you work through the three fundamental tasks necessary for inclusive excellence: 1) broadening the applicant pool; 2) minimizing implicit bias in evaluation; and 3) creating a welcoming climate that sells candidates on the university, and on the community."

Recent retirements and administrative changes have made it possible to consider a diverse group of candidates for existing faculty positions. The plan is to mirror the demographics of students, staff, and faculty as closely as possible with new hires. This is clearly a challenge for immediate and long-range planning.

Diversity of Students and Faculty

Complete statistics on diversity of faculty and students in the NAAB-accredited programs are available in ARS reports posted on the HCAD website at https://design.njit.edu/accreditations

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

Program Response:

HCAD has a majority minority student population. Current numbers of diverse students in the architecture programs (see https://design.njit.edu/accreditations) reflect the demographics of the Middle Atlantic Region, especially of New Jersey. They also are aligned with the demographics of NJIT. Plans are to stay in touch with statistics and assure that discrepancies can be addressed as they occur.

Diversity statistics are reviewed every year by administrators in the College and in the School and are shared with faculty and staff. KPIs are compared to statistics for the Institute annually. Diversity goals are discussed at faculty meetings, in meetings with students in both

the graduate and undergraduate programs, in meetings with the Advisory Board, and with upper-level NJIT administrators.

Diversity initiatives are reviewed annually with respect to the alignment with the NJIT Master Plan 2025–especially with respect to the first bullet in the 2025 Mission Statement:
● "Education—preparing diverse students for positions of leadership as professionals and as citizens through innovative curricula, committed faculty, and expansive learning opportunities"
And also to the Diversity section of the Values statement:
"We celebrate the inclusiveness of our university community and are sensitive to cultural and personal differences. We do not tolerate discrimination in any form."

See table below for NJIT student enrollments by race/ethnicity in 2021. Black and Asian undergraduate enrollment is lower than NJIT overall; the Hispanic category is higher. Statistics for graduate students show a lower percentage for Asian students and a much higher percentage for the Alien category.

Undergraduate statistics in architecture (https://design.njit.edu/accreditations) are very similar in most categories:
White 38%
Black 5%
Hispanic 25%
Asian 14%
American Indian -0-
Alien 6%

Graduate statistics for 2021 in architecture (https://design.njit.edu/accreditations) are similar in most categories:
White 36%
Black 8%
Hispanic 17%
Asian 11%
American Indian -0-
Alien 28%

Undergraduate Enrollment by Race/Ethnicity: Fall 2021

	Full-Time		Part-Time		Total	
	N	**Percent**	**N**	**Percent**	**N**	**Percent**
White	2,412	33.0%	384	20.4%	2,796	30.4%
Black	664	9.1%	156	8.3%	820	8.9%
Hispanic	1,593	21.8%	329	17.5%	1,922	20.9%
Asian*	1,726	23.6%	240	12.8%	1,966	21.4%
American Indian	8	0.1%	3	0.2%	11	0.1%
Alien	457	6.3%	58	3.1%	515	5.6%
Unknown	445	6.1%	708	37.7%	1,153	12.6%
Total*	7,305	100.0%	1,878	100.0%	9,183	100.0%

Asian includes Pacific Islanders and Unknown includes 2 or More Races.

The following changes in demographics for the architecture programs are based on statistics reported in the NJIT ARS for 2015 compared to the ARS for 2021:

Undergraduate

White decreased from 46% to 38%
Black increased from 3% to 5%
Hispanic decreased from 29% to 25%
Asian decreased from 17% to 14%
American Indian stayed at -0-

Graduate
White decreased from 50% to 36%
Black increased from 3% to 8%
Hispanic decreased from 20% to 17%
Asian increased from 5% to 11%
American Indian stayed at -0-
Alien increased from 13% to 28%

Complete diversity statistics for Architecture undergraduate and graduate students, and for total NJIT students for Academic Years 2014-2021 can be found here:
https://docs.google.com/spreadsheets/d/1IgS6pIo2i8X2xuiyy9SBVosTskpC3bMW/edit#gid=333706564

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

Program Response:
There are many opportunities at NJIT for architecture students to be involved in support of social equity, diversity, and inclusion initiatives, both as volunteers and as paid employees.

The mission of the office of Diversity and Inclusion (https://www.njit.edu/diversityprograms/) is to initiate and support activities that promote cultural competency among students of the NJIT Community:
"The Office of Student Life is committed to raising self-awareness, mutual understanding, knowledge, and respect for others. Our approach is relational in that we believe in growth-fostering relationships, therefore we commit to providing a welcoming place for all. We pledge to offer a safe space and outlet for dialogue; we commit to provide mentorship and support; as well as engage students to become advocates for issues of injustice in our multicultural world."

Policies addressing social equity issues (union contracts, employee handbook, Title IX Sexual Harassment Policy, Code of Student Conduct, and anti-discrimination statements among others) can be found at https://www5.njit.edu/policies/index.php.

Support applicable to minority students described on the admissions website (https://www.njit.edu/admissions) includes a full range of options and opportunities to help offset costs for students [including minorities] who qualify based on need, academic excellence or area of study. They include:
● Scholarships
● Financial aid including grants, loans, and work-study
● Co-op and internship programs
● Research opportunities
For undocumented immigrant students there is support, information, and resources at https://www.njit.edu/financialaid/dreamers.

The architecture programs benefit from the NJIT diversity initiatives by graduating more minority students eligible to take the ARE, by having a more inclusive view of client/user group needs in designing studio projects, and by having diverse role models (staff, faculty, and alumni) for minority students.

Resources for students from diverse backgrounds include:
- Center for Pre-College Programs Bulletin
- https://njit.campuslabs.com/engage/organizations
- Underrepresented Minorities | Office of Graduate Studies

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

Program Response:
Canvas and Ally
As part of NJIT's ongoing commitment to accessibility and inclusiveness, BlackBoard Ally has recently been made available. Ally is an accessibility tool that seamlessly integrates with Canvas, NJIT's Learning Management System (LMS) https://ist.njit.edu/blackboard-ally.

Ally provides instructors with an accessibility score (a small speedometer icon) for course content uploaded to Canvas. In addition to the score, which is only visible to the course instructor, Ally provides feedback on what could be done to improve the accessibility of the course material. In addition to this feedback, a course accessibility report is available.

Ally provides students with the option to download course materials in alternative formats. These include, but are not limited to tagged PDF, HTML, ePub, Electronic braille, and audio formats. These alternative formats are generated automatically by Ally and do not require any additional work/intervention from the instructor. The benefit of the alternative formats is that students may find those formats easier to access and navigate.

While Ally use is optional, instructors are encouraged to look at their *Ally Course Accessibility Report* and/or the accessibility score for individual files. This report and score provides awareness of accessibility of content and is not singularly reflective of the overall quality of the course content. The Institute for Teaching Excellence provides training sessions on Ally.

Office of Accessibility Resources and Services
The New Jersey Institute of Technology is committed to making students with disabilities full participants in its academic and extracurricular activities through the provision of reasonable accommodations for students with documented disabilities. https://www.njit.edu/accessibility/

The Guttenberg Scholarship for Students with Physical Disabilities
New Jersey Institute of Technology has a long history of providing access to education for all students regardless of economic, social, or physical disabilities. In keeping with this tradition, the Guttenberg Scholarship Fund continues to provide financial assistance for qualified students with physical disabilities. The Guttenberg Scholarship

State of New Jersey resources for faculty, staff, and students are described at https://nj.gov/humanservices/dds/home/

5.6 Physical Resources

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

General Description of Physical Resources
The Hillier College of Architecture and Design exists within Weston Hall, Colton Hall, and Campbell Hall. The New Jersey School of Architecture and the School of Art and Design share all facilities. Entrances and exits to all buildings are controlled by card swipe access 24 hours a day, 7 days a week. In addition, the 3rd floor main entrance to Weston Hall is unlocked on weekdays between the hours of 6.30am and 10:00pm. All instructional and lab spaces are combination key coded. New codes are generated each semester and these are distributed to students enrolled in studios to access individual studio spaces.

The seven-floor building is accessed by a main central stair, a prominent design feature of the building. On various levels the stair lobby is used for exhibition of large scale models such as a site model of downtown Newark, and a prototype of a tiny house designed for Newark's homeless population. The building houses studio space, seminar rooms and lecture halls, faculty offices, shops, a gallery, and the Littman Library. The IDEA Factory is home to the office, research labs, and studios taught by Interim Director of the School of Art and Design and Associate Professor Martina Decker.

The main third floor entrance from the heart of campus opens to a mezzanine or loft overlooking the second floor gallery space. The loft contains tables and chairs, as well as armchairs, for student lounging. This space is across the lobby from a small kitchen with a roll up window, where students sell refreshments. As a result, it is a main area of public interaction.

The first floor entrance, from MLK Boulevard, is key carded. While secure, a lobby / exhibition space fronts and activates the street. The Weston Lecture Hall is easily accessible to the public from this level.

The fourth floor of the building is the location of the Littman Library, which is physically and pedagogically at the heart of the building. It is a main social hub. 8.5 x 11 and 11 x 17 printers are located here, and many students meet here to study individually and in groups. The Mostoller Reading Room is used often by students and faculty.

Changes to Physical Resources
- There are no current spaces under construction in the College.
- The Student Mall Annex has recently been renovated to house three upper-level architecture studios due to increased enrollments this fall semester.
- NDC has long range plans to house three studios on Market Street.

Significant Problems
With the success of increased enrollments has come a main challenge; we are all but out of studio space. The maximum student studio enrollment identified by the College and corroborated by the university was 810 students (55 studios @ 15 students each). This fall 2022 we have 727 students enrolled in the College studios. One inherent challenge is that studio cohorts do not often work out to a multiple of 15 (national standard for undergraduate architecture education). While in some cases we can raise studio enrollment to 15/16 in lower level studios, in other

smaller cohorts, studio enrollments may work out to only 12 or 13 per room or possibly fewer. We continue to work with the University to find solutions to this problem and appreciate the support we have received to make other spaces on campus available to house studios as our enrollments rise. We realize that these same growth/space problems exist in multiple other academic units as NJIT strives to reach its overall enrollment goals. The inherent conflicts will likely increase until the University provides adequate physical facilities or we are allowed to leverage other effective course delivery modalities.

Off Campus Settings

Urban Center
Newark

NJIT@Egypt
NJIT is opening a branch campus outside of Cairo, Egypt, in Mostak-bal City, in 2024. The new campus will serve over 3,000 students in eight academic programs: Architecture, Business, Civil Engineering, Concrete Technology, Construction Management Technology, Information Technology, Manufacturing Engineering Technology and Medical Informatics. The School of Architecture will occupy its own building, scheduled to open in the fourth and final phase of the project in 2026, with a total enrollment planned of 359 architecture students. The degree will say NJIT - Egypt or NJIT@Egypt and will be a separate degree. At this time, the Architecture degree is not planned to be a NAAB accredited degree, it is planned to be a 5-year BS in Architecture. Currently the intention is to offer Egyptian architecture graduates the opportunity to pursue an M.Arch degree with advanced standing at the home campus in Newark. In order to provide NJIT@Egypt students with advanced standing, NAAB criteria will need to be met in BS Arch courses.

The NJIT-Egypt Initiative began in 2018, with Egyptian business partner Tatweer Misr. A Space Program Study was completed by AE7, Ikon 5 Architects and the SmithGroup in July 2021. Sasaki Associates of Boston was chosen for all design services and began conceptual design in fall of 2021. The former Director of the School of Architecture, Kelly Hutzell, virtually joined Sasaki and NJIT's Senior Vice President for Real Estate and Capital Operations, Andrew Christ, and Assistant Vice President for Campus Planning, Design and Construction, Todd Miller, for weekly design review meetings throughout fall of 2021 and spring of 2022 to provide design feedback (she had previously taught at Carnegie Mellon's branch campus in Doha, Qatar). She was also invited to serve with other faculty, staff and students on an NJIT-Egypt Initiative Advisory Committee.

5.6.1 Space to support and encourage studio-based learning.

Program Response:
Every student has a studio desk. Architecture studios are interspersed throughout the building, often adjacent to industrial design, interior design and digital design studios. Generally, each studio year / cohort is assigned to contiguous spaces. First year studios are traditionally located in the old gym, although only half of the cohort fits in this space currently. Graduate students are traditionally located on the top seventh floor. Most architecture studios are located in the open "decks," on the 4th, 5th, 6th and 7th floor of Weston Hall. An outdoor courtyard space outside the Gallery is used for design / build projects and our annual commencement celebration.

For labeled plan drawings showing studio spaces, see Section 5.6.3.

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

Program Response:

The Weston Lecture Halls underwent a full renovation in 2020, with a ribbon cutting in September 2021 upon our return to in-person learning. Weston Lecture Hall I, the larger of the two spaces, is conveniently located on the first floor adjacent to an open lobby and the elevators. This makes it easily accessible to students and the public for events, including the Lecture Series. The projection/screening facilities were specifically selected to provide high resolution and color fidelity, and acoustics, thermal comfort and ADA accessibility were addressed. The smaller Weston Lecture Hall II is accessible via the second floor.

Seminar spaces are interspersed throughout the building and are often used for classrooms. With all studios meeting on Monday and Thursday afternoons, studio coordinators work with one of the front desk staff to assure equitable use of seminar spaces and the gallery and lobby spaces for pin ups and reviews.

Computing resources for architecture and design students are outlined here: https://design.njit.edu/computing-resources. The Print Room and 3D Lab are located on the fifth floor. These spaces are managed by the AIAS and outlined here: https://www.aiasnjit.com/printroom. The Wood Shop, Laser Lab, Metals Lab, Paint Room and Casting Room are all located on the top seventh floor of the building. Equipment is outlined here: https://design.njit.edu/fabrication-facilities-and-labs

For labeled plan drawings showing the above listed spaces, see Section 5.6.3.

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

Program Response:
Full-time faculty and University Lecturers are provided offices located in Weston and Colton Halls. Most faculty offices open onto HCAD studio spaces or corridors. The Interim Director and the Advisors are located in the third floor administrative suite, open between 8:30am and 4:30pm. This space also contains two conference rooms and one open meeting space, as well as a kitchen for use by all faculty, adjunct instructors, and staff. Faculty make use of their offices, research labs, the fabrication labs, and library during and outside of class time. Tenure track faculty may make use of research startup funds to equip working labs for their research.

For plans labeled with classrooms, offices, conference rooms, any facilities for adjunct faculty who have no offices, see Section 5.6.3.
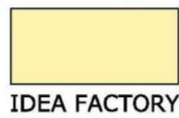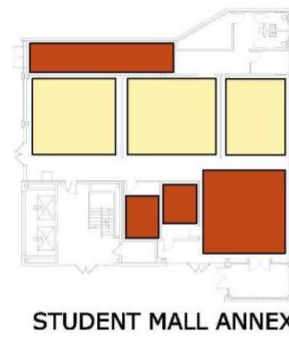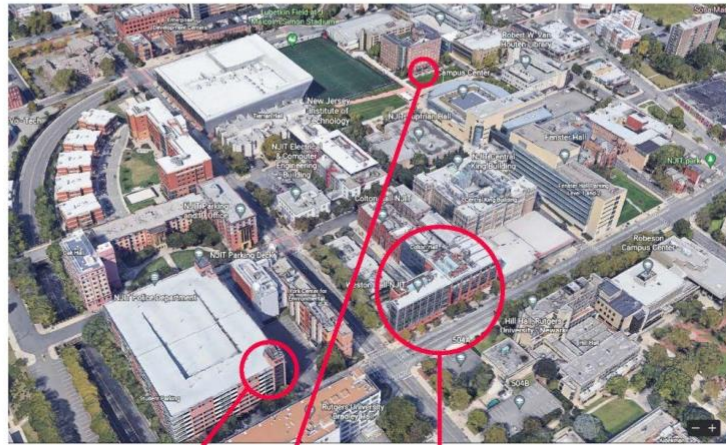
HCAD Floor Plans

FALL 2022 CONDITIONS - WESTON HALL + ANNEXES
COLLEGE OF ARCHITECTURE AND DESIGN

1ST FLOOR

LEGEND

- 54 STUDIOS
- 2 SHOPS (1 PRINTING)
- 10 LABS
- 2 LECTURE HALLS
- 7 SEMINAR ROOMS
- 49 OFFICES
- 16 REVIEW / EXHIBITION
- 1 RESEARCH
- 1 LIBRARY
- OCCUPIED BY OTHERS

IDEA FACTORY

STUDENT MALL ANNEX

151

140

ALUMNI LECTURE HALL
160

STORE FRONT REV.

FALL 2022 CONDITIONS - WESTON HALL
COLLEGE OF ARCHITECTURE AND DESIGN

2ND FLOOR

LEGEND

- STUDIOS
- SHOPS (1 PRINTING)
- LABS
- LECTURE HALLS
- SEMINAR ROOMS
- OFFICES
- REVIEW / EXHIBITION
- RESEARCH
- LIBRARY
- OCCUPIED BY OTHERS

GROUND CAMP 1

GROUND CAMP 2

GROUND CAMP 3

CAMP. REV.

CAMP. REV.

249

251

WESTON 2

260

262A

248

252

258

250

254

256

220 GALLERY

210

FALL 2022 CONDITIONS - WESTON HALL
COLLEGE OF ARCHITECTURE AND DESIGN

3RD FLOOR

LEGEND

- STUDIOS
- SHOPS (1 PRINTING)
- LABS
- LECTURE HALLS
- SEMINAR ROOMS
- OFFICES
- REVIEW / EXHIBITION
- RESEARCH
- LIBRARY
- OCCUPIED BY OTHERS

C236H

C236D

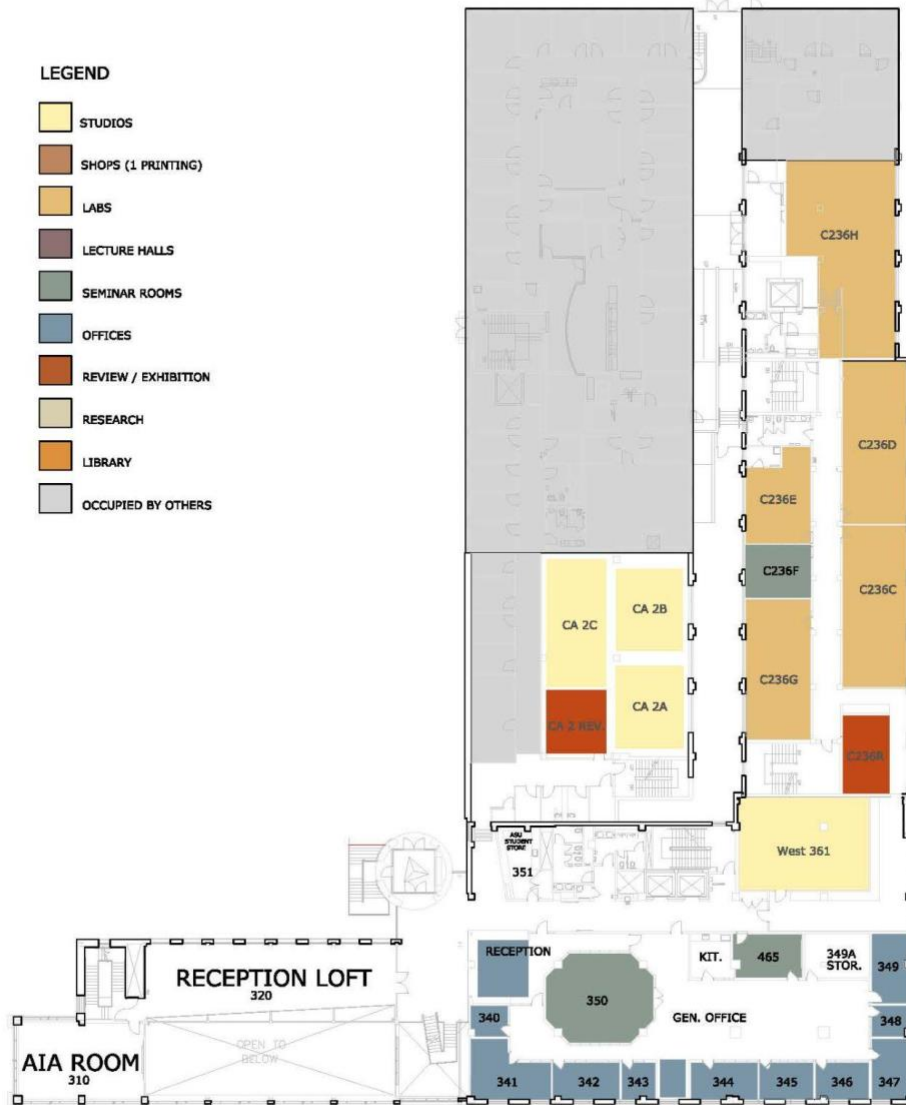C236E

C236F

C236C

CA 2C

CA 2B

C236G

CA 2 REV

CA 2A

C236A

West 361

ASU STUDENT STORE

351

RECEPTION

KIT. 465 349A STOR. 349

RECEPTION LOFT
320

340

350

GEN. OFFICE

348

AIA ROOM
310

OPEN TO BELOW

341 342 343 344 345 346 347

FALL 2022 CONDITIONS - WESTON HALL
COLLEGE OF ARCHITECTURE AND DESIGN

4TH FLOOR

LEGEND

STUDIOS

SHOPS (1 PRINTING)

LABS

LECTURE HALLS

SEMINAR ROOMS

OFFICES

REVIEW / EXHIBITION

RESEARCH

LIBRARY

OCCUPIED BY OTHERS

CA 329

CA 330

CA 331

CA 332

CA 333

CA 334

CA 335

CA 343

CA 342

CA 341

CASBR

MATERIALS LIBRARY

456 - LIBRARY

415

425

410

420

426
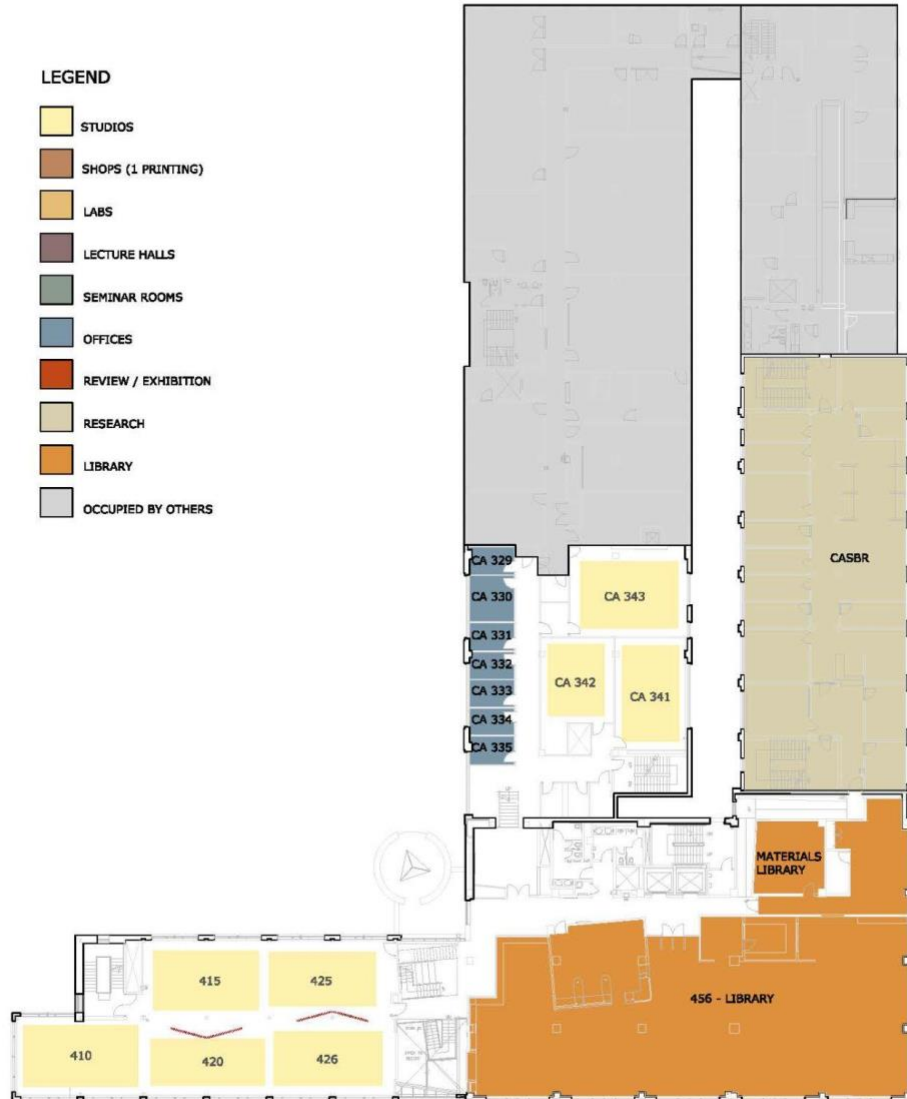
FALL 2022 CONDITIONS - WESTON HALL
COLLEGE OF ARCHITECTURE AND DESIGN

5TH FLOOR

LEGEND

STUDIOS

SHOPS (1 PRINTING)

LABS

LECTURE HALLS

SEMINAR ROOMS

OFFICES

REVIEW / EXHIBITION

RESEARCH

LIBRARY

OCCUPIED BY OTHERS

C GAL REV. A

C GAL REV OPEN

C GAL RC

C GAL LB

C GAL RB

C GAL LA

C GAL RA

C GAL REV B

551

561

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521 522 523 524 531 532 534 533

557

550   554   560

510   520   530   540   556   558
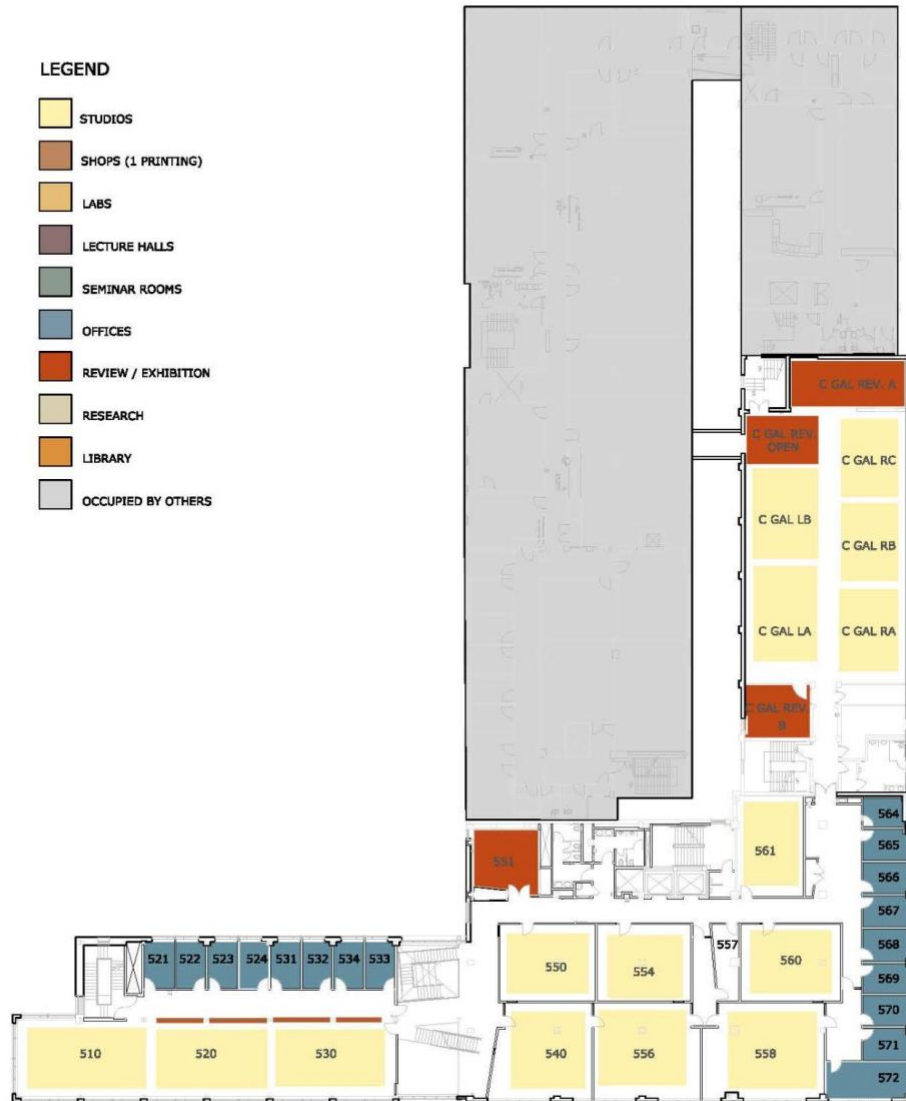
FALL 2022 CONDITIONS - WESTON HALL
COLLEGE OF ARCHITECTURE AND DESIGN

6TH FLOOR

LEGEND

STUDIOS

SHOPS (1 PRINTING)

LABS

LECTURE HALLS

SEMINAR ROOMS

OFFICES

REVIEW / EXHIBITION

RESEARCH

LIBRARY

OCCUPIED BY OTHERS

FALL 2022 CONDITIONS - WESTON HALL
COLLEGE OF ARCHITECTURE AND DESIGN

7TH FLOOR

LEGEND

STUDIOS

SHOPS (1 PRINTING)

LABS

LECTURE HALLS

SEMINAR ROOMS

OFFICES

REVIEW / EXHIBITION

RESEARCH

LIBRARY

OCCUPIED BY OTHERS

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

Program Response:

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

Program Response:
See Section1 for information about the Siena.(see Link)

See Section 1 for a description of hybrid studio arrangements to meet larger enrollment goals.

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

Program Response:
Process
Based on the historical budget allocated to the College, the Director of Administration plans and requests operating budget funds to the Finance Department in the fall of the prior fiscal year. The software that is used is BudgetPak and the money is divided into major accounts such as travel, supplies, equipment, membership dues and fees and general use. Any requests for additional funds beyond the proposed base funds are reviewed by senior leadership and either approved or denied. Final draft budgets are loaded into Banner Finance at the beginning of the Fiscal Year, in July.

Long-range planning is based on projected enrollment and involves both operating and capital expenditures. The program budgets are extrapolations of present needs and the needs of increased enrollment. They are rolled up in the college budget, which, in turn, is rolled up in the university budget. The only non-enrollment based increase is a reflection of increased IT support which is recognition of the technology-related needs of a School of Architecture in a technology-focused research university.

Expense and Revenue Categories
The only revenue category we have control over is the Introduction to Architecture summer program that we run for high school students. This program is run each summer and has been both in person or virtual during COVID. It is a financially self-sustaining program where the revenue generated covers the expenses of the program and it is therefore separate from the general operating budget.
Tuition and Fees collected by the University is not an area in which we have influence or control.

NAAB Annual Report Submissions - Financial Resources

NJSoA NAAB ARS BUDGET SPREADSHEET					
NAAB ARS Year	Total Revenue All Sources	Expenditures Instruction	Expenditures Capital	Expenditures Overhead	Cost / Student FTE Enrollment
2015	$9,706,824	$3,588,899	$48,461	$2,927,479	$9,933
2016	$9,284,000	$4,201,220	$48,461	$2,847,479	$11,065
2017	$8,365,474	$3,704,978	$7,808	$4,258,484	$12,358
2018	$10,868,704	$3,609,606	$0	$4,193,386	$12,505
2019	$11,544,400	$3,699,002	$0	$4,307,607	$12,394
2020	$11,615,184	$3,951,951	$0	$4,150,642	$12,680
2021	$12,193,408	$3,563,684	$0	$4,122,155	$11,471

- Expense categories- Personnel and Non-Personnel
  - Personnel
  - Non-Personnnel
  - Non- Tenure Track
  - Tenure/Tenure Track
  - Academic Year Adjunct
  - Summer/Winter Session
  - Other Faculty Compensation
  - Administration Salaries
  - Staff salaries
  - Hourly, Temporary, Overtime
  - Student Workers (non-union) ie: Teaching Assistants
  - Student Workers (union)
  - benefits
  - Major Operating Expenses
  - Library Collections
  - Equipment
  - Utilities
  - Supplies
  - Travel, Meetings, Meals, and Registration
  - Chargebacks and Cost Recoveries
  - Budget Reserves

Design Showcase Fundraising Event (see Link and 3.1, PC. 2 for description)

Scholarships / Fellowships
The NJSoA provides $95K+ in total student scholarship awards annually, with $49K based on the Awards Committee selection, and $46K from Admissions. The School of Art and Design has a separate committee.

There are two HCAD ceremonies each year: 1) the Commencement Celebration; and 2) the Fall Award Ceremony. Nominations and voting are held in April for the Commencement Celebration awards. These are prestige awards, with no monetary gift (except the Mostoller Prize):

- School of Architecture Alpha Rho Chi Medal & Certificate
- School of Architecture Integrated Studio Award- Undergraduate
- School of Architecture Excellence in Design Award -- Graduate Options
- School of Architecture Master of Infrastructure Planning Studio Award

- AIA Henry Adams Medal & Certificate (Grad and Undergrad)
- School of Architecture Medal (Grad and Undergrad)
- School of Architecture - Thesis Project
- Mostoller Prize

For the Fall Awards Ceremony, nominations are held in April with selections by June 1. The ceremony is typically held the last Monday in September. 38 NJSoA awards are bestowed. Award types include prestige, internship, travel awards, and financial gift (varies from $500 to $5,000 which is included in financial aid). Eligibility is based on gender and/or ethnicity, need, interest, residency and/or enrollment status. While a third of the awards are based on design excellence, awards are also based on academic achievement, computing, construction, leadership, etc. The nomination process is led by the faculty Awards Committee who conduct a Surveymonkey of all faculty and evaluate applications (for internships).

For a full listing of all undergraduate and graduate NJSoA Scholarships in Fall 2022, see:
https://drive.google.com/file/d/1N42erM8rYhHH36-xgVQABnUIg4bxStHy/view?usp=sharing
For a full listing of all undergraduate and graduate NJSoA Awards in Spring of 2023, see:
https://drive.google.com/file/d/1oLLHPLLmiakwBlWAcd4NbrMSN2ADOSHv/view?usp=sharing

Grant Funds
Faculty are encouraged to seek grant funding for research or special projects through outside organizations. Every Sunday, the Senior Provost for Research sends out a "Research Awards and Grant Opportunities" newsletter with Special Announcements and grant opportunities.

Students are also encouraged to pursue grant funded research. URI Student Seed Grant proposals are internal $5,000 seed grants that are funded by the NJIT Provost's Office which support student work with faculty on a particular project.

Independent Studies have led to successful National Science Foundation's Innovation Corps (ICorps) grant awards for students and faculty teams. An Independent Study provides a unique opportunity for upper level students to develop and/or engage in self-driven, specialized topics of investigation, with faculty guidance.

A successful example is the NSF I-Corp grant "An Intuitive Design Platform for Sustainable Multifamily Residential Buildings" (2022): Principal Investigator Associate Professor Taro Narahara, Entrepreneurial Lead: B.Arch student Peter Zhang, Industry Mentor: Charles Portelli. Peter also received the ARCC King Student Medal for Excellence in Architectural and Environmental Design Research.

Enrollment Changes
The enrollment of the Architecture program in the Hillier College of Architecture and Design has been on a steady increase for the past two academic years, growing from 431 to 566 undergraduate students and 36 to 63 graduate students. In response to the recent increase in enrollment and expected continuation of this trend into the 2023-2024 AY and beyond, the College is preparing a phased approach to not just add space but to reimagine the design studio from a pedagogical and physical perspective.

There are no anticipated reductions in funding. Despite an increase in enrollment, operating budgets have remained consistent over the past several years with funds added as needed for a Dean's search, faculty searches, and accreditations. One time funding has also been given to develop and execute marketing and advertising plans to raise awareness of the College in an effort to increase yield and therefore enrollment. With the enrollment increases over the past two academic years, there will be a request for an increase of three (3) faculty lines, which will be

made by the Dean to the Provost of the university. Seed grant funding is expected to remain the same if the Interim Provost continues in the policies started by the Provost emeritus.

Changes in Funding Model

The only change in funding models for faculty, separate from general compensation, is that incoming faculty with an established track in research are awarded start-up funds in their first year. Typically, for architecture faculty, there are three years in which to spend the funds. Start-up funding is approved for spending on conference travel, books, lab equipment and student research assistants. The funding model, and annual base budget, for instructional needs, overhead and facilities has remained the same. The NJIT Tenure/Tenure Track Faculty Startup Fund Compliance Guidelines are outlined on the website here:
https://www5.njit.edu/policies/sites/policies/files/Start%20Up%20Fund%20Guidlines.pdf

Development Campaigns

An internal campaign named Designing for the Future administered through the Office of Development intends to raise funds to redesign studio spaces, update equipment, and provide scholarships (see link)

5.8 Information Resources

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

Program Response:

Institutional Context & Administrative structure

The Barbara & Leonard Littman Library is a part of the NJIT library system. Housed in Weston Hall, it is the only branch library. Its collections serve not only the Hillier College of Architecture and Design (HCAD), but the entire university community as well as professionals and scholars across the New Jersey and New York area.

The Littman Library is headed by Director Maya Gervits who reports to the University librarian, who, in turn, reports to the Provost. The Director is responsible for all library activities including collection development, reference, and instructional services, the development of the various digital projects, and the library website (http://archlib.njit.edu). The Library produces annual reports, which are submitted to the University Librarian and shared with the HCAD administration and faculty. The Director also serves on NJIT Committee on Information Technology, Library, and Academic Resources (CITLAR) and chairs the HCAD Faculty-Library committee which includes representatives of the college administration and faculty.

The Littman Library is open 72 hours, 7 days per week, during the fall and spring semesters. In addition to the Director, the library is staffed with an Architecture Art and Design Librarian, a part-time Library Assistant, and student employees.

Library and Collections

The Library Director is responsible for collection development with the participation of the HCAD Faculty-Library Committee. Individual faculty and students' requests are also taken into consideration during the selection and acquisition process. While the Littman Library selects

materials, the Van Houten Library (the main University library) provides centralized acquisition, processing, and cataloging

The Library provides in-library and remote access to materials in various formats:

- Print and electronic books
- Print and electronic journals
- Bibliographic and full-text databases
- Slides and digital images
- Video recordings and streaming videos
- Microforms and computer files
- Product catalogs and material samples

The collection is accessible primarily in open stacks and standard shelving units.
The Littman Library also acquires (very selectively) archival resources, architectural drawings, and prints. These resources are available for in-library use only but some of them have been digitized and made available online. Materials in high demand are placed in a reserve section for in-library use only for limited periods of time.
All titles are organized according to the Library of Congress Classification system and are kept on an integrated library system designed to provide catalog searching, material circulation, acquisition, processing, and course reserves.
Library holdings are also represented in the national Online Computer Library Center (OCLC) database.

Range of materials

The Library's collections are focused on various subject areas:
- architecture and design
- architectural history
- theory and criticism
- architecture education
- professional practice
- building construction and materials
- building systems
- urban planning
- urban history
- landscape architecture
- architectural education
- interior design and decoration
- furniture, textiles, and lighting
- industrial design
- digital design

Considerable effort has been made to reflect recent trends such as globalization, environmental, demographical, and social changes in the world, focusing on sustainability, high-density housing, energy-efficient buildings, and new building materials and media.

Although our holdings cover the entire timeline of the history of architecture and interior design, the major emphasis is on the 20th and 21st centuries. They concentrate on physical planning, urban design, and history, and focus on studies in contemporary architecture in relation to infrastructure planning, technology, urbanism, computer-aided design and manufacturing, parametric design, and Building Information Modeling (BIM). The library also collects materials on building systems, industrial and interior design, historical preservation and conservation, transportation, resilient design, photography, the visual arts, art history, mixed reality, digital design and animation, game design, UI/UX, and environmental psychology among various subjects. As a response to growing trends and the university-wide interdisciplinary initiative focused on "convergent life science and engineering, "digital everyware" — ubiquitous computing — and sustainable systems", our collections have become more interdisciplinary in scope. Our materials to some degree overlap with those housed in Van Houten Library, especially in such subject areas as engineering, building construction and systems, computers, social science, history, land use, environmental psychology, transportation, infrastructure, material science, marketing, and management. This overlap exists, mostly in reference materials such as building codes, cost data, and encyclopedias, but duplication is done extremely selectively and additional copies are purchased only for titles that are heavily used. To avoid duplication, books that are in high demand are placed in the reserve area. Also, the availability of electronic books ensures campus-wide and off-campus online access to a wide range of materials and prevents duplication of some interdisciplinary resources.

Books

Maintaining currency in the areas related to the College's curriculum and its various activities remains a top priority. Selection is made by the library director and the library collection reflects the significant efforts to acquire titles from principal architectural trade and university publishers in the US and abroad. The library's collections have been steadily growing and currently contain 26,867 print books. More than 18,314 of these are classed in the NA-NX range. There are also 2082 items with a location of Arch Journal. There are many more materials in electronic format and also resources in the Van Houten Library.
The Littman Library depends on firm orders for specific titles using various vendors and also maintains a small approval plan with Worldwide Books, which automatically delivers the most important publications of Actar-Birkhauser. Electronic books are being acquired via Rialto Marketplace

The Library collections are international in scope. We acquire materials published in the USA, Canada, European countries, Asia, Latin America, and to a lesser extent in Africa and Australia.

The items we collect are primarily in English, but we do purchase polyglot editions, and occasionally materials in languages other than English.

We also maintain a small collection of rare, out-of-print, and scarce resource materials (books, pamphlets, and maps), which date from the 18th through the 21st century. They prove to be an invaluable resource for research and teaching architectural history.

Journals and Databases

Recognizing that our students and faculty need to have convenient access to current periodicals and a rapidly growing number of digital resources, we subscribe to both print and electronic journals, and to available online indexes and databases. Since our last accreditation, we have added several journals and databases, including ArtStor, Detail Inspiration, and A+T online library. Our collection of journals is current, international in scope, and relates to the college curriculum. Overall the University library provides access to 337 journals in visual arts, architecture, and design, in either print or electronic formats, as well as to ninety-nine open-source peer-reviewed periodicals available online.

The Association of Architecture School Librarians' *Core List of Architecture Periodical Titles"* includes 48 fundamental titles, 44 recommended and 66 topical ones. The Littman Library provides access to 30 periodicals on the fundamental list, 16 titles on the recommended and 16 on the topical lists. More periodicals in such areas as art history, psychology, material science, engineering, transportation, management, environmental studies, and computer science are housed in the Van Houten Library and/or available online.

In addition to databases specialized in art and architecture, our users can access interdisciplinary databases such *as Jstor*, *OmniFile, Academic Search Premier, Scopus, NexisUni, Factiva, NYT,* and those on related subjects: *Access Engineering, Science Direct, Wiley Interscience, Civil Engineering Database, IEEE, ASCE Database, ACM Digital Library, SpringerLink, Nature,* and *Business Source Premier*.

Finally, more databases can be found at the DANA Library of Rutgers University

Visual Resources

Although we still own an extensive slide collection, the Littman Library focuses its attention on the development of the *Image Database* (as of June 21 – 24,635 images) and *Digital Archive of Newark Architecture,* which is actively used by both students and faculty. Digital images are collected under the guidelines of the general collection development policy, which is strictly related to the curriculum and guided by the goal to be "a collection of currency".

We continue to further develop the *Digital Archive of Newark Architecture* (DANA) which includes anything of interest to the built environment of the city, its architecture, and infrastructure. Currently, DANA contains hundreds of digitized images and documents, including 650 maps, 258 articles, dozens of records of the *National Register of Historic Places Inventory*, and numerous pages focused on particular buildings and architects. It is being actively used by students, faculty, scholars, and the general public within the US and globally.

 Our collection of video recordings is not large; our ability to buy materials aggressively in this format is limited, as videos for institutional use are extremely expensive. Nevertheless, since last accreditation we made several important acquisitions and also launched access to streaming videos via Kanopy streaming services.

The library graphic collection includes more than 1,260 maps and architectural drawings mostly related to New York and New Jersey. Many of them have been digitized as part of the *Digital Archive of Newark Architecture (DANA)* to make them available remotely

Services

As stated by the NAAB "*the accredited program must demonstrate that all students, faculty, and staff have access to architecture librarians and visual resources professionals who provide information services that teach and develop research, evaluative and critical thinking skills necessary for professional practice and lifelong learning*"

The Littman Library does precisely that. We worked closely with the HCAD administration and faculty to develop the Information Literacy plan – the university-wide initiative intended to meet the Middle States Commission on Higher Education (MSCHE) requirements. (In 2022 the Commission reaffirmed NJIT's accreditation for the next decade). All freshmen participate in a freshmen seminar that includes library orientation and a sequence of classes offered by a Van Houten Library in tandem with a writing workshop, which addresses more general Information Literacy aspects, while we at the Littman Library are focusing on competencies more specific for design disciplines. The HCAD and the Littman library work together to design relevant curriculum and course-specific instruction sessions to foster research skills among both graduate and undergraduate students. Among the discussed outcomes - students' ability to:
- define the research topic and the need for information,
- develop and implement an effective search strategy appropriate for an information need,
- evaluate information, assess research strategy,
- employ principles consistent with the ethical and legal uses of information,
- organize, synthesize, and communicate information,
- effectively navigate the body of knowledge within the student's major discipline."

In order to assess instructional services and to meet requirements specific to design disciplines, the Library participated in the development and is guided by the [Standards for Information Competencies for Students in Architecture and Design Discipline](#), an initiative undertaken by the American Association of Architecture School Librarians (AASL) and ARLIS.
Librarians and faculty collaborate on assignments that can help students not only develop information literacy skills but also better understand the nature of the design process. In addition to individual and group instruction sessions librarians offer subject consultations and workshops, design research guides, and video tutorials. LibGuides developed by Springshare are being used as a platform for general, course- and subject-specific guides. Posted on the Library website (http://researchguides.njit/.edu) along with video tutorials they can be accessed remotely even when the library is closed. They can be incorporated into a course management learning environment like Canvas. That gives an opportunity to introduce them at the point when students are assigned their studio projects or research papers. Two large monitors installed in the Library allow for simultaneous introduction during instruction sessions of both print and online resources as well as to have students more engaged in instruction activities. Faculty can request and reserve materials and equipment for their classes personally, via e-mail, or by submitting an online request.

We regularly assess our resources and services to weigh up their strengths/weaknesses and consider how things might be improved. While student work remains the primary evidence of our success or deficiencies, we use other tools as well. We collect and analyze a variety of data that informs our decisions. We keep statistics of door counts, circulation data, titles purchased, · bound volumes of periodicals, ILL transactions, reference transactions and subject consultations (based on samples),classes taught, reserves compiled, research guides and other educational materials created and their usage tracked, images added to the Littman Library Image Database,· records added to the History of HCAD database, number of grant proposals and grant value,

number of records added to the Digital Archive of Newark Architecture (DANA). We also use Google Analytics to analyze how DANA is accessed.

We share the collected data with the University library and HCAD administration, faculty, and students to keep them informed on our activities. Our reports are being incorporated into the University library reports. The collected data is also being reported annually to ACRL and used during various accreditations.
To get our constituents' feedback at any time, and in any form, we attend faculty meetings, work with various student organizations, and use the "suggestion box."
Littman Library was consistently getting positive feedback in student satisfaction surveys conducted annually by the University and by the New Jersey Library Association.

Library staff engage in continuous efforts to improve the services and resources we provide. To better recognize users' needs we analyze comments from the Suggestion box, annual Snapshot day, and students' surveys.

The HCAD faculty-library committee meets on a regular basis to discuss various related issues, the library works in contact with various student organizations. Our decisions regarding library services and collections are based, to a large extent, on their feedback.

Other Information Resources

To keep faculty and students aware of any changes and to advertise library services and resources we:

- Publish a monthly Library newsletter, which is distributed via email
- Design and display around the building posters and flyers
- Maintain an ongoing exhibit of new books
- Occasionally exhibit special part of the collection
- Maintain the library presence on Social Media.
- Keep faculty and graduate students informed on new acquisitions in person & via email

During regular open hours of the Littman Library, professional reference services are provided Monday through Friday, sixty hours a week in person, or via e-mail and over the phone by two professional librarians and by Library Assistant, on weekends it is available by email or WebEx.

The Littman Library has cooperative agreements that enhance the services provided through reciprocal access and borrowing privileges, ILL and Rapid Document Delivery, as well as the exchange of professional expertise. VALE membership grants participants in a cooperative agreement with numerous academic libraries in New Jersey. Students cross-registered with Rutgers University have access to collections and services offered by this institution. Students are encouraged to use local collections, which supplement NJIT holdings such as Newark Public Library with their extensive picture collections and holdings of New Jersey Room, New York Public Library, New Jersey and New-York Historical Society, and Columbia University Avery Library (special permission required)

The Library actively participates in community engagement and extracurricular activities:
- Curates and hosts several exhibitions per year,
- Facilitates Author Book Talks (in person and virtual),
- Teas with Alumni (in person and virtual),

- Skills Exchange workshops
- Music in the Library events
- Architecture and Art Trivia and Game Nights

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The Library initiated several projects including the History of HCAD, that is focused on preserving the college's past activities and incorporates text, images, conducted interviews, as well as archival resources, for example, recently acquired archive of Ezra Ehrenkrantz, the founding director of the Center for Building Science.

The Library director also assists faculty with identifying, locating, and obtaining materials for their research. She provides bibliographic assistance and helps with citation searches during their promotion process, and submits citation analyses to the University Promotion & Tenure Committee.

Librarians also actively participate in the work of regional and national professional organizations (AASL ARLIS, ALA) by conducting research, publishing, and making presentations at professional conferences.

Facilities and Usage

The Littman Library is located at the very center of the School, on the 4th floor of the Weston hall, adjacent to studios, faculty, and Ph.D. Students' offices and symbolizing its importance in the college's pedagogical mission. A $100,000 renovation project expanded the library space which is currently 7,377 square feet. The recently added area for users with laptops increased the number of seats. It is a critical resource heavily used by students and faculty alike, not only as a repository of knowledge but also as a point of its dissemination and as a social place that hosts various events. The library's location provides easy access to its various collections, as well as to professional assistance and library equipment. The use of its services, space, and collections is significant. More than 45% of university transactions and e-book usage occur in areas related to the college curriculum.

At present, the Library has sufficient lighting, electrical service, heating, and ventilation. It is protected from theft by standard security systems that help to ensure that no materials leave the library without being checked out. Since our last accreditation, the library collection has grown and has already reached maximum shelving capacity. We are in the process of eliminating duplications and outdated materials. Recently added Mostoller Reading Room, space for housing Material library and special collections, and Digital Scholarship Lab should alleviate existing space constraints.

Equipment

The Library provides a wide assortment of equipment for both in-house use and check-out. Students can use computers, with direct access to the Internet and network. Since the last accreditation, all public computers have been replaced by new ones. There are two stations with direct access to the online catalog and eleven public computers with an internet connection, access to a shared drive, and presentation and publishing software. Students are increasingly using in the library their own devices (laptops and smartphones to access the Internet, take photographs, or scan documents).

Recently established Digital Scholarship Lab can be used by students and faculty and provides access to Virtual Reality set, Augmented Reality HoloLens-2 equipment, Looking Glass, Book scanner, and hand-held scanner/translator as well as three computer stations with specialized software.

Within the library patrons can also use the following equipment:

- Flatbed and slide scanners
- Color networked printers/scanners
- b/w networked printers
- two large monitors
- Light table

Items available for check-out include:
- Laptops with presentation software
- XGA projectors
- Slide projectors
- Traditional and blu-ray DVD players and VCR
- Photo cameras
- Portable screen
- headphones

Patrons may also use microfilm readers, available in the Van Houten Library, as well as equipment at the University Media Services

Visual Resource Professionals

The staffing of the Littman Library has remained relatively consistent. The staff consists of the Director of the Library, the Architecture, Art, and Design Librarian, both of whom are degreed librarians with subject expertise, a part-time (60% of the time) Library Assistant, and 20-25 students-employees working on average 6 hours per week, (the equivalent of 3.4- 4FTE).

The Director of the Library, Maya Gervits, has a Ph.D. in Art and Architecture History (Institute of Art History, Moscow), Master in Library and Information Science (MLS) (Rutgers University, NJ), MA in Art History (Academy of Fine Arts, St. Petersburg, Russia) and certificates in web design and object-oriented programming (MCCC, NJ).Prior to her appointment, Dr. Gervits worked as a curator at the Hermitage Museum (Russia), Western Art Bibliographer at Princeton University, and Art Librarian at Rutgers University.

Architecture, Art, and Design Librarian Kennedy Jones in addition to an MLS degree and a Master of Arts in Art History, both from Indiana University, holds a Bachelor of Fine Arts in Studio from the School of the Art Institute of Chicago, IL.

Part-time Library Assistant Cherron Bradshaw holds a BA in psychology.

Budget/Administration/Operations

The Littman Library is a branch of the Robert Van Houten Library. The Director of the Library reports to the University Librarian and is a member of the management team of the Van Houten Library.

A portion of the main University library institutional budget is allocated to the Littman Library for book acquisition and journal/electronic resources subscription. As stated earlier, the Van Houten Library provides acquisition process, cataloging, InterLibrary Loan (ILL), and Rapid Document Delivery. Funding for computer equipment comes from both the Van Houten library (staff computers), University Computing Services, and the College (public computers). Approximately 28 percent of the University library student work-study budget is assigned to the Littman Library. The Library also receives additional budget support from the College. Each year a number of graduate students are assigned to the Littman Library to work on various education-related projects. Annual donations from the alumni Lindemans family, grants, and $150,000 endowment by the Littman family provide supplemental funding. In 2021 we received an external grant ($19,000) to support the development of the mobile application of the *Digital Archive of Newark Architecture* with the Augmented Reality components. Collections of books, donated by emerita professors Wall, Celik Littman, and Mostoller enabled us to fill gaps in retrospective publications in several subject areas. Patron Driven Acquisition (PDA) of e-books allowed us to rent books and to acquire only those titles that have been loaned out consistently and therefore to improve remote access to titles available in electronic format as well as use our funds more efficiently.

 Library Statistics Report

The following is an inventory of the Littman Library's current information, digital and visual resources, and the annual funding support. It does not count related materials housed in the Van Houten Library.

Type of Collections	*Number of volumes*	*Budget in $ 2019-2020*	*Budget in $ 2020-2021*	*Budget in $ 2021-2022*
Books classed in LC-NA or Dewey 720		*n/a*	*n/a*	*n/a*
Other Books		*14,206*	*10,666*	*25,000*
Books electronic		*6,405*	*13,609*	*12,695*
Periodical Subscriptions		*13,199*	*13,556*	*12,891*
Other Serials				
Microform Reels	*11*			

Microfiche	3,477			
Slides	80,262			
Videos[i]	110		1,145	750
CD-ROMs	0			
Photo CDs	0			
Digital Image Files	24,635			
Other Electronic Publications/Databases[ii]		25,108	27,793	21,937
Drawings	1,260			
Photographs	0			
Other (Equipment and Collection) Preservation & space renovations	n/a	152,000 endowment from L. Littman[iii]	2,500 from Lindemans[iv] 11,000 – from university	19,000-NJHC[v] 2,500 -from Lindemans
Total		**210,918**	**80,269**	**81,882**

[i] Kanopy streaming services started in 202-2021

[ii] The number includes only databases paid by the Littman Library, there are general databases like JStor that are funded by the Van Houten Library

[iii] Endowment from the Littman family that generates annual income

[iv] Donation from the Damadian-Lindeman family

[v] $19,000 grant received from the New Jersey Historical Commission

6—Public Information

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

6.1 Statement on NAAB-Accredited Degrees

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

Program Response:

The statement required in this section is posted at https://design.njit.edu/accreditations

6.2 Access to NAAB Conditions and Procedures

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

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

Program Response:

All of the required documents in this section are posted at https://design.njit.edu/accreditations

6.3 Access to Career Development Information

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

Program Response:

Links to career development and placement services are posted at https://design.njit.edu/accreditations

6.4 Public Access to Accreditation Reports and Related Documents

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

a) All Interim Progress Reports and narratives of Program Annual Reports submitted since the last team visit
b) All NAAB responses to any Plan to Correct and any NAAB responses to the Program Annual Reports since the last team visit
c) The most recent decision letter from the NAAB

d) The Architecture Program Report submitted for the last visit
e) The final edition of the most recent Visiting Team Report, including attachments and addenda
f) The program's optional response to the Visiting Team Report
g) Plan to Correct (if applicable)
h) NCARB ARE pass rates.
i) Statements and/or policies on learning and teaching culture
j) Statements and/or policies on diversity, equity, and inclusion

Program Response:

a. All Interim Progress Reports and Program Annual Reports are posted at https://design.njit.edu/accreditations
b. There are no NAAB responses to any Plan to Correct or any NAAB responses to the Program Annual Reports since the last team visit.
c. The most recent decision letter from the NAAB is posted on the HCAD Accreditation page here: https://design.njit.edu/accreditations
d. The 2013 APR is posted on the HCAD Accreditation page here: https://design.njit.edu/accreditations
e. The final edition of the most recent Visiting Team Report, including attachments and addenda is posted at https://design.njit.edu/accreditations
f. There was no optional response to the Visiting Team Report.
g. The Plan to Correct is not applicable.
h. The link to NCARB ARE pass rates can be found here: https://design.njit.edu/accreditations
i. The Learning and Teaching Culture Policy is posted on the HCAD webpage under Current Students, here: https://design.njit.edu/learning-and-teaching-culture-policy
j. Policies on diversity, equity and inclusion are posted on the University Diversity and Inclusion website here: https://www.njit.edu/diversityprograms/

6.5 Admissions and Advising

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

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

Program Response:

a) Apply Now | New Jersey Institute of Technology

b) **B.Arch**
Freshman: Rolling admissions; required portfolios are uploaded to Slideroom and reviewed by B.Arch program coordinator. All other materials are reviewed by Admissions. Transfers: Rolling admissions; required portfolios are uploaded to Slideroom and reviewed by B.Arch program coordinator. Minimum GPA is 2.6. Transcripts, syllabi, and student work are reviewed by faculty for remediation decisions, advanced standing and

specific transfer credit award. SAT is only required for Honors College applicants. Minimum test score is 1370. 1500 is the average for the Honors College.

M.Arch
Rolling admissions; all materials, including required portfolios are uploaded to Slate and reviewed by M.Arch program coordinator. Transcripts, syllabi and in some cases student evidence are reviewed by faculty for advanced standing.

c) Coursework for both undergraduate and graduate programs from non-accredited schools is evaluated by the admissions office staff for general education courses, by submission of WES transcripts for international students, and by faculty for architecture-related electives based on examples of student work.

d) Forms, and support, for applying for financial aid and scholarships can be found at https://www.njit.edu/admissions/tuition-costs

e) Given the diverse makeup of the New Jersey and New York population, NJIT enjoys a deep and diverse pool of applicants. This is regularly reflected in the annual statistical reports. Percentages of students from various backgrounds are watched closely to assure they reflect local conditions. Recruitment for students includes reaching out to high schools with diverse populations.
Support for Spanish-speaking applicants is provided by a diverse staff, advisors, and faculty fluent in Spanish and English.

6.6 Student Financial Information

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

Program Response:

NJIT has a centralized system for managing financial aid resources and advice to students. Please see Tuition & Costs | New Jersey Institute of Technology

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

Program Response:

The following link provides current financial information on the Bursar's web pages. Tuition & Costs | New Jersey Institute of Technology

The pages referenced show costs for a single academic year. Undergraduate and graduate tuition and fees are clearly described in separate areas. Additional estimates for architecture student costs are included.

7—Appendices

Full Time Faculty and Lecturer Resumes