



THE COOPER UNION
FOR THE ADVANCEMENT
OF SCIENCE AND ART

SELF-STUDY REPORT

FOR COMPREHENSIVE 2018 MIDDLE STATES

RE-ACCREDITATION



STEERING COMMITTEE

Daniel Lepek ChE'04, Co-Chair

Associate Professor of Chemical Engineering

Brian Cusack ME'01/'03, Co-Chair

Director of Campus Enterprise Systems

Antoinette Torres, Director of Strategic Initiatives and Institutional Effectiveness

Benjamin Davis, Associate Professor of Chemical Engineering

Cara Di Edwardo A'85, Printmaking Technician, Adjunct Professor of Art

Day Gleeson, Associate Professor of Art

Claire Gunning, Librarian

Sam Keene, Associate Professor of Electrical Engineering

Mindy Lang A'82, Creative Director, Office of Communications,

Adjunct Professor of Art

Christine Osinski, Professor of Art

Yash Risbud EE'92/'94, Director, C.V. Starr Research Foundation (through December 2017)

Keith Stokeld, Controller (joined Steering Committee January 2018)



THE COOPER UNION
FOR THE ADVANCEMENT
OF SCIENCE AND ART

SELF-STUDY REPORT

FOR COMPREHENSIVE 2018 MIDDLE STATES

RE-ACCREDITATION

ELIGIBILITY CERTIFICATION STATEMENT	6
MIDDLE STATES RESOURCE WEBSITE	7
EXECUTIVE SUMMARY	9
PREAMBLE TO THE SELF-STUDY	11
History	
Recent History	
Financial Aid Model	
Consent Decree	
A Revised Vision and Mission	
Shaping the Path Forward	
Scope	
CHAPTER I: MISSION AND GOALS	19
Introduction	
Path to a New Mission Statement	
Strategic Planning	
Impact of the Change to the Financial Aid Model	
Ranking	
Support of the Mission	
CHAPTER II: ETHICS AND INTEGRITY	40
Introduction	
Federal Policies	
Institutional Policies	
Complaint Procedure	
Plagiarism	

Conflict of Interest Policy
Student Code of Conduct
Institutional Review Board
Collective Bargaining Agreements
Academic Freedom, Freedom of Expression, and Grievances
Intellectual Property
Human Resources
Diversity and Inclusion Task Force
Financial Aid
Office of Communications
The Board of Trustees and Their Compliance with the Consent Decree

CHAPTER III: DESIGN AND DELIVERY OF THE STUDENT LEARNING EXPERIENCE 49

Introduction
The Cooper Union in New York City
The 2016-2017 Academic Year Student Profile
The Faculty
Curriculum Committees
Assessment of the Student Learning Experience
Graduate Programs
Undergraduate Degree Programs
The Humanities and Social Sciences Curriculum
Communication, Intellectual, and Technological Skills
Institutes and Centers
Individually-Driven Learning Experiences
Exchange Programs, Articulation with Other Schools, and Cooper Union in Africa
Non-Degree Programs
Tuition-free High School Programs
Academic Support

CHAPTER IV: SUPPORT OF THE STUDENT LEARNING EXPERIENCE 71

Introduction
The Office of Admissions
Financial Aid
Retention
Academic Advisement
Academic Standards
Student Affairs

CHAPTER V: EDUCATIONAL EFFECTIVENESS ASSESSMENT	107
Introduction	
Educational Goals	
Institutional Learning Goals (ILGs)	
School and Program Learning Goals and Objectives	
Assessment of Student Achievement of Learning Goals	
Unit-level Assessments	
Communication of Student Achievements and Educational Goals	
Curriculum	
CHAPTER VI: PLANNING, RESOURCES AND INSTITUTIONAL IMPROVEMENT	121
Introduction	
Finances	
Personnel	
Infrastructure	
Technology	
CHAPTER VII: GOVERNANCE, LEADERSHIP, AND ADMINISTRATION	135
Introduction	
Governance	
The Board of Trustees	
President Laura Sparks	
Academic and Administrative Councils	
Organizational Restructuring and Effectiveness	
The Faculty-Student Senate	
CONCLUSIONS AND RECOMMENDATIONS	141
Conclusions	
Recommendations	
APPENDIX I: WORKING GROUP MEMBERS	143
APPENDIX II: BOARD OF TRUSTEES	145
APPENDIX III: ORGANIZATIONAL CHART	146
APPENDIX IV: OFFICERS	148
APPENDIX V: DOCUMENT ROADMAP	149



Certification Statement:
Compliance with MSCHE Requirements of Affiliation
[For use by institutions addressing the Accreditation Standards in *Characteristics of Excellence: Requirements of Affiliation and Standards for Accreditation (12th ed., 2006)*
Effective August 1, 2015

The Cooper Union for the Advancement of Science and Art
(Name of Institution)

is seeking (*Check one*):
 Initial Accreditation
 Reaffirmation of Accreditation through Self Study
 Reaffirmation of Accreditation through Periodic Review

An institution seeking **initial accreditation** or **reaffirmation of accreditation** must affirm that it meets or continues to meet established MSCHE Requirements of Affiliation.

This signed certification statement must be attached to the executive summary of the institution's self-study or periodic review report.

The undersigned hereby certify that the institution meets Requirements of Affiliation of the Middle States Commission on Higher Education as published in *Characteristics of Excellence: Requirements of Affiliation and Standards for Accreditation (12th ed., 2006)*.

If it is not possible to certify compliance with all requirements specified herein, the institution must attach specific details in a separate memorandum.

Exceptions are noted in the attached memorandum (*Check if applicable*)



(Chief Executive Officer)

2/28/18
(Date)



(Chair, Board of Trustees or Directors)

2/28/18
(Date)

MIDDLE STATES RESOURCE WEBSITE

All documents referenced in this report may be found on the resource website.

To access The Cooper Union Middle States resource website, Middle States Evaluation Team members should visit the URL listed below. Since there is restricted access to this site, a prompt will appear requiring team members to enter a “username” and “password.” The following username and password will grant access to the site:

<HTTPS://MIDDLESTATES2018.COOPER.EDU>

USERNAME: msche2018

PASSWORD: _____

From there the navigation is broken down by chapter.

As discussed in detail throughout this report, the assessment was done during a time of transition for The Cooper Union. While this document captures data and reports as of February 2018, additional materials may emerge leading up to the Middle States Evaluation Team Visit in April 2018. The Cooper Union will make every effort to update this report and the resource website with additional data as necessary and invites the Middle States Evaluation Team to request any additional information as needed.

EXECUTIVE SUMMARY

The Cooper Union for the Advancement of Science and Art, established in 1859, is among the nation's oldest and most distinguished institutions of higher education. The college, founded by inventor, industrialist and philanthropist, Peter Cooper, offers a world-class education in art, architecture and engineering, as well as an outstanding faculty of humanities and social sciences. From its inception, The Cooper Union has remained true to the guiding vision of its founder. It remains at the forefront of social and political justice, seeks to create active citizens and maintains an academically rigorous and challenging course of study in its schools of art, architecture, and engineering, and its Faculty of Humanities and Social Sciences.

The Cooper Union has experienced many significant challenges and changes since the last Middle States Self-Study, which occurred in 2008; many of which occurred after the submission of the 2013 Periodic Review Report. The changes that are described in the Preamble to this Self-Study provide a mounting appreciation of The Cooper Union's financial condition and highlight the ensuing challenges to its ability to support a tuition-free education and fulfill its mission, and the importance of the institution's mission to its community.

The Self-Study Report is arranged into seven chapters that are directly correlated to the current seven Middle States Commission on Higher Education Accreditation Standards. Each chapter comprehensively describes how The Cooper Union demonstrates compliance with each standard. Evidence that The Cooper Union meets the Requirements of Affiliation can also be found in the Self-Study Report and associated documents. The Self-Study Report also contains a Preamble, which describes the recent history of The Cooper Union, and a final Conclusions and Recommendations section.

The process for producing the Self-Study Report was overseen by a Steering Committee comprised of faculty, staff, and administrators. Seven Steering Committee members each chaired a Working Group that was associated with a particular accreditation standard. The Working Groups varied in composition, but were primarily comprised of volunteers from all areas of the institution, including faculty, students, staff (both part time and full time), administrators, and alumni. Each Working Group was tasked to critically examine how The Cooper Union demonstrates compliance with each accreditation standard, through the development of an extensive Self-Study Design (published in November 2016) and a comprehensive review of the suggested criteria for each standard. In February 2018, the entire Cooper Union community was given the opportunity to provide feedback regarding the report.

Following a critical review of the report and the associated community feedback, the Steering Committee developed six broad recommendations, which are provided at the end of the Self-Study Report. These recommendations were provided to help guide future Strategic Planning efforts in order to ensure that The Cooper Union will be in a strong position to stabilize its finances, identify pathways to further expedite a return to providing a free education to all undergraduate students, and to continue to deliver high-quality educational programs, that could be described in the words of Peter Cooper, "equal to the best."

PREAMBLE TO THE SELF-STUDY

FREE.

This word threads its way through many of The Cooper Union's founding documents and self descriptions for over 160 years. What it means to offer a truly free education at any given time has always been a matter of discussion, never more so than at the present, when the rising cost of higher education and The Cooper Union's own financial limitations have challenged the institution's traditional mission and produced vigorous internal debate, leadership change, Board reorganization, a legal challenge to the Board's decision to charge tuition, and, perhaps most importantly—a renewed sense of purpose.

In 2016, when the Middle States Steering Committee began the two year process to perform a self-study, the ink was still wet on a consent decree, which ended the lawsuit brought by alumni, faculty and students against the school. In the two years while this study and report were in-process:

- The Cooper Union transitioned from a new interim president to a new permanent president
- new and revised mission and vision statements were crafted through community engagement and approved by the Board
- strategic planning started in earnest for the first time in a decade
- a court-mandated committee assessed the financial state of the institution and published its recommendations for a plan to return to full-tuition scholarships for all students
- a court-mandated financial monitor was appointed and released two reports critiquing these documents
- nearly three quarters of all management personnel have changed, including new hires in Institutional Assessment, Finance/Administration, and other key senior administrative positions
- a Diversity Task Force was developed along with a community planning collaborative

This report chronicles the institution during these transitions. Many opportunities for improvement have already been addressed, as evidenced by recent accomplishments. For others, the institution is still transitioning, as is reflected in our recommendations. This Self-Study offers further recommendations and suggestions for institutional improvement, innovation, and renewal.

HISTORY

The Cooper Union for the Advancement of Science and Art enjoys a rich history founded on what was a profound commitment to make higher education accessible to those who qualify for admission regardless of race, religion, gender, wealth or social status. At the time of its founding, Peter Cooper charged that his endowment to the school be “forever devoted to the advancement of science and art, in their application to the varied and useful purposes of life,” and to provide an education “as free as air and water.” The Cooper Union was established as both an educational and civic model, a social union that would be furthered in the offerings of the Foundation Building, constructed in 1859.

For over 150 years, Peter Cooper’s financial generosity has provided working class men and women with the opportunities to not only receive instruction at a highly selective institution that would otherwise be accessible only to the wealthy and those who were privileged, but to also enjoy the full exercise of citizenship through open and rigorous discourse on the challenges of their times.

To embody the idea of a social and intellectual “union,” Peter Cooper established his institution above a central gathering place, the Great Hall. In the Great Hall of the Foundation Building, free lectures by speakers whose views were reshaping society were available, offering the community opportunity to engage in the challenging themes and discourse of their times: Abraham Lincoln delivered his famous “Right Makes Might” speech in the Great Hall on February 27, 1860, Frederick Douglass rallied abolitionists in the Great Hall, and it was in the Great Hall that Douglass celebrated Lincoln’s Initial Emancipation Proclamation. The Cooper Union would become a transformative New York City icon, hosting many of the progressive reforms of the day. Peter Cooper’s legacy to the city would be a site of progressive social reform and new forms of educational advancement.

The Cooper Union was among the first private institutions of higher education in the nation to:

- admit students based solely on merit
- explicitly prohibit discrimination based on race, gender, religion, ethnicity, or national origin
- provide a free education to every admitted student, before free public education became public policy*
- offer a free reading room, a more democratic version of the public library, open to all residents of the city

The services and programming in the Great Hall and Foundation Building would establish The Cooper Union as a civic institution—it housed a public reading room and library, a School of Design for Women, a Night School of Science and Art, an employment office for local workers, a patent office, a Museum of Nature and Technology, a roof garden, and the first Museum of Decorative Arts in the United States—the Cooper Hewitt—which is now part of the Smithsonian.

*In the late twentieth century, wording on tuition was changed to “full-tuition scholarships” in order to take advantage of various tuition grant programs.

For over 150 years, The Cooper Union has provided a free and high quality education to those with merit, mitigating social and economic deterrents that could impede individual and social progress. The Cooper Union degree has been strongly tied to an unyielding commitment to academic and intellectual excellence, where unencumbered by financial concerns, students have been afforded the opportunity to fully engage in an environment that spurs intellectual curiosity, accomplishment, and social good.

Through its program offerings in architecture, art, and engineering, The Cooper Union continues in its social contract with the city of New York, the nation, and the world.

RECENT HISTORY

At the time of the Middle States decennial visit in 2008, The Cooper Union's mission statement firmly established its commitment to the development of talented students, where admission would be based solely on "merit," and the awarding of full-tuition scholarships would provide opportunity for unfettered intellectual and academic engagement. To fulfill its mission, the institution placed a premium on the engagement of its faculty with students to engender an educational experience that was "humanistic," and one in which the city of New York was itself an extension of the campus. The mission was a living testament to Peter Cooper's ideals regarding educational outcomes that benefit the social good:

"Through outstanding academic programs in architecture, art and engineering, The Cooper Union for the Advancement of Science and Art prepares talented students to make enlightened contributions to society. The college admits undergraduates solely on merit and awards full-tuition scholarships to all enrolled students. The institution provides close contact with a distinguished, creative faculty and fosters rigorous, humanistic learning that is enhanced by the process of design and augmented by the urban setting. Founded in 1859 by Peter Cooper, industrialist and philanthropist, The Cooper Union offers public programs for the civic, cultural and practicable enrichment of New York City."

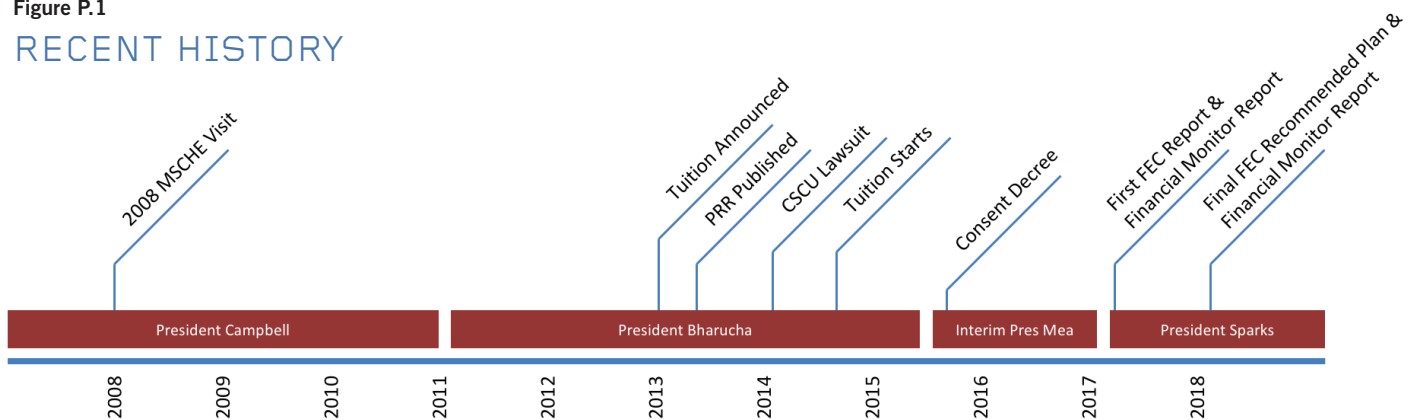
However, since the 2008 Middle States decennial reaccreditation visit, The Cooper Union has experienced significant challenges and changes; many since the 2013 Periodic Review Report. The changes described herein describe a mounting appreciation of The Cooper Union's financial condition and ensuing challenges to its ability to support a tuition-free education and fulfill its mission, and the importance of The Cooper Union's mission to its community.

Since 2014, crucial conversations regarding The Cooper Union's mission, the importance of "being free" and what that means with regard to students' learning experience, and the ability to sustain the commitment to merit and quality are ongoing. In the wake of a financial awakening, the campus has been engaged in ways to sustain the legacy of the Cooper Union with greater and increasing integration of the faculty and student community in governance and governance processes, improving transparency and fostering greater accountability to the ideals of The Cooper Union's mission.

Since the last decennial visit in 2008, The Cooper Union has experienced four very different leaders in Presidents: George Campbell, Jamshed Bharucha, Bill Mea (Interim), and, most recently, Laura Sparks (figure P.1). Through these transitions, the institution has gained a deeper understanding of the financial considerations and forces that hinder The Cooper Union in fulfilling its historic mission, as well as the need for the financial analysis and oversight to support achievement of the mission and sustain operations. In the period since 2008, there have been several revisions to the mission statement to reflect shifts in the financial assessment of our ability to deliver a “free education,” yet preserve the fundamental commitment to access, excellence, and the community at large.

Figure P.1

RECENT HISTORY



2011 might be considered a watershed year; a pivot point for Cooper Union. Although its financial circumstances had been mounting over many, many years, the decision by then President Jamshed Bharucha to charge tuition brought The Cooper Union’s financial circumstances to a head. Under his presidency, an analysis of The Cooper Union’s finances revealed an annual structural deficit of approximately \$15 million, and established that the lack of sufficient liquid assets posed a serious threat to the institution’s long-term sustainability. In 2013, after considerable community discussion and debate, the Board of Trustees voted to reduce the minimum full-tuition scholarship to 50% for all undergraduates admitted to The Cooper Union beginning with the class entering in the fall of 2014. This was a very difficult decision for the Board. Trustees were torn but viewed it as the only way to save The Cooper Union from having to close its doors. Under the new policy, a financial aid model was designed to take financial need, as well as revenue targets into consideration, such that students with demonstrated need continue to receive full-tuition scholarships.

FINANCIAL AID MODEL

The financial aid model that was introduced in 2013 was developed to cover 50% to 100% of the students’ tuition costs based on a combined application of scholarships and grants. The goal of the financial model is such that no students have to pay more than 50% tuition. All Pell-eligible students receive a 100% tuition scholarship. The metric

used to calculate the student's demonstrated need is the expected family contribution (as reported on a student's FAFSA) and total cost of attendance (tuition, fees, materials, boarding etc.).

Through this model, and achievement of the revenue target of \$2,000,000 per year, The Cooper Union has been able to provide the minimum 50% tuition scholarship to every undergraduate, but also need-cognizant tuition scholarships in excess of the 50% scholarship award to students with financial need. Currently, the average undergraduate tuition scholarship levels are approximately 76%.

Nonetheless, the departure from the full-tuition scholarship model, and the imposition of tuition, was deemed by many in the Cooper community (faculty, staff, students and alumni) as being in direct conflict with The Cooper Union's mission. There were concerns that the imposition of tuition would challenge what had been a merit-based admission process and introduce potential risk to The Cooper Union's selectivity and place in the community. The reaction was profound, reflecting the strong commitment of faculty, staff, students, and alumni to the vision of The Cooper Union's founder and the unique place The Cooper Union holds in the higher education landscape. The commitment to "free" was and is clearly strongly and deeply held.

CONSENT DECREE

In May 2014, before the first students admitted under the new policy could be enrolled, a group of faculty and alumni, collectively called "The Committee to Save Cooper Union" (CSCU), challenged The Cooper Union's decision to charge tuition in court, calling it a violation of the founder's intentions and the institution's charter. The CSCU sought an injunction against charging tuition and on September 2, 2015 The Cooper Union's Board of Trustees entered into a consent decree with the CSCU and the Office of the Attorney General of the State of New York pursuant to which the lawsuit was settled.

In connection with the Consent Decree, the Attorney General filed a petition for cy pres relief that proposed interpreting the effective terms of The Cooper Union's Deed of Trust and Charter. The petition for cy pres relief was granted to The Cooper Union stipulating that the institution could charge tuition as long as it could demonstrate the need to do so, but that "*it should work to assess whether the institution could return to a sustainable full-tuition scholarship model while maintaining its reputation for academic excellence within the existing fields of study; and historical levels of enrollment.*"

These terms were contained in a consent decree stipulated by the parties on September 21, 2015 and approved by the presiding judge on December 16, 2015. In June 2015, Jamshed Bharucha resigned, and Vice President Bill Mea was thereafter appointed Interim President.

The stipulations of the Consent Decree might be considered a "game changer" for The Cooper Union—in the stipulation to find a path back to free there would be a deep and comprehensive financial analysis and a mandate that would foster greater transparency and accountability of the The Cooper Union's Board of Trustees by including

students and elected alumni on the Board, as well as faculty and staff observers at all meetings. The task of identifying possible routes back to the full-tuition scholarship model was delegated to a new committee of the board, known as the Free Education Committee (FEC), whose membership would include trustees, student trustees, and elected alumni trustees. A faculty representative and a staff representative are included as observers at FEC meetings.

The FEC was charged with making final recommendations by January 2018 as to whether The Cooper Union could return to free tuition. Its recommendations are subject to review by a court-mandated independent financial monitor, the Board of Trustees as a whole, and by the Office of the Attorney General.

The Board of Trustees announced the appointment of a new President, Laura Sparks, in the fall of 2016. She arrived to campus in January 2017, almost in concert with the January 15, 2017 release of the interim progress report of The Free Education Committee, which had been meeting regularly throughout 2016. Not long after, on February 15, 2017, the Financial Monitor released his Annual Report. On March 7, 2017, two months into her appointment the Board of Trustees released a response to the January 2017 Free Education Committee report, stating that it will commit itself to supporting the FEC in achieving the goal of a return to full-tuition scholarships while maintaining long term financial sustainability.

In January 2018, the FEC published its plan and recommendations for the institution to return to full-tuition scholarships for undergraduate students. This plan sets forth a number of specific recommendations, guardrails, and additional options left in the “bullpen” that could be pursued. If the financial goals are achieved, these recommendations project a “return to free” within ten years, with expected scholarship increases beginning in as little as two years. The FEC recommendations are currently being reviewed by the Board of Trustees and the New York Office of the Attorney General.

A REVISED VISION AND MISSION

Following a year-long process (as described in more detail in Chapter 1), the Board of Trustees adopted new institutional Vision and Mission Statements in late December 2017, which read as follows:

Vision

The Cooper Union for the Advancement of Science and Art is dedicated to Peter Cooper's radical commitment to diversity and his founding vision that fair access to an inspiring free education and forums for courageous public discourse foster a just and thriving world.

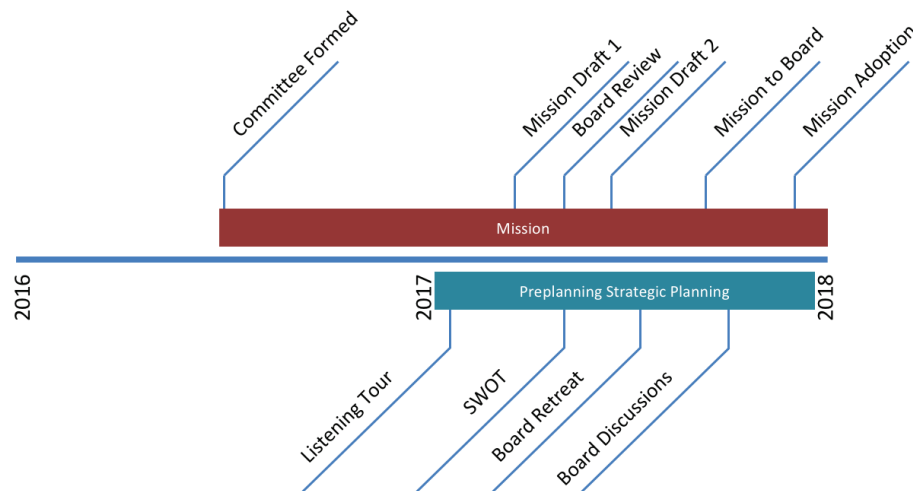
Mission

Our mission is to sustain The Cooper Union as a free center of learning and civic discourse that inspires inventive, creative, and influential voices in architecture, art, and engineering to address the critical challenges and opportunities of our time.

The adoption of the revised mission statement provides a foundation for The Cooper Union's strategic planning process (figure P.2).

Figure P.2

MISSION AND STRATEGIC PLANNING



SHAPING THE PATH FORWARD

President Sparks began her time at the institution laying the groundwork towards a strategic plan and associated fiscally responsible budget. Her first few months were spent, in part, engaged in a listening tour across the campus. In March 2017, a SWOT (strengths, weaknesses, opportunities, threats) analysis was conducted to explore environmental and internal conditions that might affect strategic planning. In June 2017, a Board of Trustees retreat was devoted to work associated with mission and strategic planning. The topics from this retreat were further discussed at the September 2017 Board of Trustees meeting.

In developing the FY 2018 budget, the Administration identified key expense reductions and asset growth opportunities while possible approaches to explore how The Cooper Union might broach a “return to free” were being explored with the FEC. The FY18 budget was approved based on current operations, newly identified expense reductions, recommendations made in the Free Education Committee’s interim progress report and by the external Financial Monitor, and in recognition of the institution’s long-term financial needs.

Once completed, the mission statement, associated goal setting, and strategic plan work, will inform future budgets. Budgeting for FY 2019 should reflect preliminary strategic plan priorities, particularly those approved by the Board of Trustees to support the FEC report recommendations.

Finally, despite the financial and emotional concerns that were apparent over the past few years, each of the three schools has been successfully re-accredited during the period since the institution’s last decennial review. Furthermore, the three professional schools have been successful in continuing to deliver high-quality academic programs. The success of these programs is evidenced by the achievements of the students, faculty, and alumni of The Cooper Union.

SCOPE

The financial challenges, changes in leadership and governance, and the need for a new mission have shaped many of the topics described in this decennial review. Although they are covered in greater detail later in this report, they can be summarized here:

- The Cooper Union’s strategy to achieve greater financial stability and a sustainable path back to free tuition
- a serious review of The Cooper Union mission and what “free” has meant to the institution and community
- a need to understand the impact of the move to a minimum of 50% scholarship, not only financially but with regard to The Cooper Union’s selectivity and ability to recruit and support students of high caliber
- a need for greater engagement, transparency and accountability to The Cooper Union community, the first step of which was the inclusion of students and faculty on Board and FEC structures
- the importance of, and strategies for, maintaining a vibrant, dynamic, and engaging academic program

At the moment, The Cooper Union is uniquely positioned to successfully plan for the future while learning more about its current practices under a critical lens. The ultimate goal for completing this Self-Study was to confirm that The Cooper Union meets the Standards for Accreditation and Requirements of Affiliation, as defined by the Middle States Commission on Higher Education (MSCHE). Furthermore, the results of this Self-Study will serve as a reference and will help inform future strategic and institutional planning initiatives.

By successfully completing this Self-Study Report, an introspective evaluation of current practices and objectives, and developing a forward-thinking Strategic Plan, The Cooper Union will be in a strong position to stabilize its finances, identify pathways to further expedite a return to providing a free education to all undergraduate students, and to continue to deliver high-quality educational programs, that could be described in the words of Peter Cooper, “equal to the best.”

CHAPTER I: MISSION AND GOALS

INTRODUCTION

During the recent Middle States Self-Study process, many institutional aspects related to the support of the mission and goals of The Cooper Union were examined to ensure that The Cooper Union meets compliance for the following standard regarding mission and goals, as defined by the Middle States Commission on Higher Education (MSCHE):

“The institution’s mission defines its purpose within the context of higher education, the students it serves, and what it intends to accomplish. The institution’s stated goals are clearly linked to its mission and specify how the institution fulfills its mission.”

To confirm that the institution meets compliance with this standard, several documents, procedures, processes, and community-wide activities were examined and reviewed.

In this section of the Self-Study Report, recent history regarding the Mission statement, as well as the steps taken to revise the institution’s Mission and Vision are described. Furthermore, information on how the Mission guides institutional and financial planning, as well as examples of how different academic units support and leverage the Mission are provided.

PATH TO A NEW MISSION STATEMENT

Prior to the most recent version of the Mission Statement approved by the Board of Trustees in December 2017, the following language of the Mission Statement was originally adopted by the Board of Trustees in September 2000, and reads as follows:

*Through outstanding academic programs in architecture, art and engineering,
The Cooper Union for the Advancement of Science and Art prepares talented students
to make enlightened contributions to society*

*The College admits undergraduates solely on merit and awards full scholarships to all enrolled
students. The institution provides close contact with a distinguished, creative faculty and fosters
rigorous, humanistic learning that is enhanced by the process of design and augmented by the
urban setting.*

*Founded in 1859 by Peter Cooper, industrialist and philanthropist, The Cooper Union offers
public programs for the civic, cultural and practicable enrichment of New York City.*

In 2013, the Mission Statement was modified by the President's Office to include an asterisk following the words "full-tuition scholarship," with the following text as a footnote:

Starting in fall 2014, all new undergraduate students will receive a 50% tuition scholarship

In the subsequent years (2013-2015), the course catalog and website contained a version of the Mission Statement, which read as follows, without an asterisk or footnote:

*Through outstanding academic programs in architecture, art and engineering,
The Cooper Union for the Advancement of Science and Art prepares talented students
to make enlightened contributions to society.*

*The College admits undergraduates solely on merit and awards a minimum of 50% tuition
scholarship to all enrolled students. The institution provides close contact with a distinguished,
creative faculty and fosters rigorous, humanistic learning that is enhanced by the process
of design and augmented by the urban setting.*

*Founded in 1859 by Peter Cooper, industrialist and philanthropist, The Cooper Union
offers public programs for the civic, cultural and practicable enrichment of New York City.*

In 2015, the Mission Statement was reverted back to the original, full-tuition scholarship language, albeit with a footnote attached to the words "full-tuition scholarship":

*Through outstanding academic programs in architecture, art and engineering,
The Cooper Union for the Advancement of Science and Art prepares talented students
to make enlightened contributions to society.*

The College admits undergraduates solely on merit and awards full scholarships to all enrolled
students. The institution provides close contact with a distinguished, creative faculty and fosters
rigorous, humanistic learning that is enhanced by the process of design and augmented by the
urban setting.*

*Founded in 1859 by Peter Cooper, industrialist and philanthropist, The Cooper Union
offers public programs for the civic, cultural and practicable enrichment of New York City.*

This version of the mission statement, while not adopted via any formal process, ostensibly served as the mission for the institution until December 2017.

*This mission statement was adopted by The Cooper Union Board of Trustees in 2000. For classes enrolling in fall 2014 and thereafter, The Cooper Union provides half-tuition scholarships, plus additional need-based aid. A committee representative of the campus and alumni communities will undertake the creation of a new mission statement as part of a strategic planning process to begin in fall 2016.

On December 16, 2015, The Cooper Union entered into a consent decree with the New York State Attorney General's office in order to resolve a lawsuit brought by members of The Cooper Union community. In the lawsuit, the petitioners alleged that the institution, under the leadership of the Board of Trustees, had violated its mission. The Consent Decree required that the Board of Trustees look at the question of whether The Cooper Union could return to a financially sustainable full-tuition scholarship model, and if so, to develop a plan to get there. The steps taken to comply with the Consent Decree are discussed in this section of the Self-Study Report.

In April 2016, a few months after the Consent Decree was signed, Interim President, Bill Mea, launched an effort, involving all constituencies of The Cooper Union, to review and revise the institution's mission. Members of the Working Group for the Mission and Vision section of the Self-Study, were asked to both participate in, and document this process. On April 12th, 2016, Bill Mea informed the community, via a campus-wide announcement, that a strategic planning and mission revision process was commencing. The following text is extracted from this announcement:

Independent of the Middle States accreditation review process, we [The Cooper Union] will begin a strategic planning process in September 2016, primarily driven at the department level and led by the President's Office, but it will also include a mission statement subcommittee. The mission statement subcommittee will be led by Peter Buckley, Associate Professor in the Faculty of Humanities and Social Sciences, and will include board members, faculty, staff, students and alumni. The rest of the strategic planning process will be accomplished by faculty, staff and students and the entire plan, including the revised mission statement, will be presented to the Board of Trustees for approval at its May/June 2017 meeting.

This campus-wide announcement marked the commencement of a new process for the revision of the mission statement.

The Mission Statement Sub-Committee Beginning in the fall of 2016, Peter Buckley, Associate Professor of History, organized a committee consisting of faculty, students, staff, alumni, and a trustee, to begin revising the Mission Statement. The members of this committee, and their affiliations, are as follows:

- Monica Abdallah, Student, ChE'17
- Peter Buckley (Chair) HSS Faculty
- Leslie Hewitt, Art Faculty, A'00
- Mauricio Higuera, Architecture Staff A'13
- Sangu Iyer, CUAA, CE '99
- Sam Keene, (MSCHE self-study liaison) Engineering Faculty
- Stan Mintchev, Engineering Faculty
- Elizabeth Rivera, Major Gifts, Alumni Affairs and Development
- Monica Shapiro, Academic administrator, Architecture
- Kevin Slavin, Trustee, A'95

This committee met bi-weekly over the course of the fall 2016 semester, examining the then-current mission statement, mission statements from other schools and organizations, and reviewed the history of The Cooper Union and its past mission statements. The committee aimed to craft a statement that was both descriptive and aspirational. On March 7, 2017, the first draft of this mission statement was sent via e-mail to the campus community, as well as to the Cooper Union Alumni Association. The draft is as follows:

Mission Draft

Founded in 1859 by Peter Cooper, philanthropist, inventor, industrialist and radical democrat, The Cooper Union for the Advancement of Science and Art was among the first private institutions anywhere to admit students and the public without regard to race, religion, gender, status, or national origin. Lacking a formal education himself the founder mobilized his fortune so others could learn. Peter Cooper extended the enlightenment to all social classes through a free, practical education “to open the volume of nature by the light of truth,” unencumbered by debt or dependency. The institution continues to admit students on the basis of merit and potential, and awards scholarships to all enrolled. The Cooper Union strives to honor Peter Cooper’s vision to provide free education for all.

Located in the East Village, The Cooper Union values New York City as a site for learning and for service. The Great Hall, the city’s historic platform for free speech, has witnessed debates on the most important issues facing the nation. Public events, outreach programming and continuing education opportunities offer informed civic discourse and cultural enrichment for the city and beyond.

The Cooper Union provides a rigorous professional education in the Schools of Architecture, Art and Engineering, enhanced by a broad curriculum from the Faculty of Humanities and Social Sciences. The Cooper Union seeks students who ask the question “What contribution should we make to the world?” Such students possess a strong work ethic and desire to become active thinkers and citizens who engage with the challenges before them. In doing so, The Cooper Union fosters a culture of collaboration among a diverse student body and faculty. Students learn that architecture, art and engineering have cultural, environmental and ethical contexts and consequences. In gaining an awareness of their own abilities they recognize their responsibility to advance Science and Art and to create a sustainable future. Peter Cooper trusted “that the students of this institution will do something to bear back the mighty torrent of evils now pressing on the world.”

The committee requested extensive feedback on this mission statement draft—from individual members of the community, to larger groups (e.g., departments, faculties, and schools). Comments, including feedback from the Board of Trustees, were collected and sent to the committee members, who continued to meet throughout the spring 2017 semester to continue revising the mission statement based on the feedback received from the community.

After considering the community’s comments, the committee deliberated, revised the mission statement, and released a second version of the draft on May 4, 2017. Every sentence and word was debated as part of this revision process, and to address the concerns about length, the statement was divided into three parts: Legacy, Civic Commitment, and Mission. This version is as follows:

Our Legacy

Opened in 1859 by Peter Cooper, philanthropist, inventor, industrialist, and champion of democracy, The Cooper Union for the Advancement of Science and Art was among the first institutions anywhere to admit students and the public without regard to race, religion, gender, status, or national origin. Lacking a formal education himself, the founder committed his fortune so others could learn. Peter Cooper extended the Enlightenment to all social classes through a free, practical education “to open the volume of nature by the light of truth,” unencumbered by debt or dependency.

Our Civic Commitment

Located in the East Village, The Cooper Union engages New York City as a site for learning and for service. Through lectures, exhibitions, partnerships, outreach programming and professional development opportunities, The Cooper Union creates a platform for informed civic discourse, educational equality, and cultural enrichment. The Great Hall, New York’s historic auditorium for free speech and social justice, continues to be a forum for addressing important issues facing the city, the nation, and the world.

Our Mission

The Cooper Union for the Advancement of Science and Art provides a rigorous professional education in the Schools of Architecture, Art, and Engineering, complemented by a broad curriculum from the Faculty of Humanities and Social Sciences. With a commitment to diversity and collaboration, The Cooper Union educates students in the ethical, cultural, and environmental contexts and consequences of their technical and creative disciplines. The institution continues to admit students on the basis of merit and potential, and awards scholarships to all enrolled undergraduates, striving to fulfill Peter Cooper's vision to provide a free education.

Peter Cooper trusted "that the students of this institution will do something to bear back the mighty torrent of evils now pressing on the world." The college seeks students who ask the question "What contribution should we make to the world?" and prepares its students to become thoughtful and active citizens who engage with the challenges before them.

Completion of Committee Work Following the dissemination of this version of the mission statement, the committee again invited the community to offer feedback. The committee also met with President Laura Sparks on May 2, 2017 to discuss the process and rationale behind the draft of the mission statement. Additional comments were received regarding the second version of the draft, and some minor grammatical changes were made. After meeting with President Sparks, the committee felt that their work was complete, and sent the final version of the draft mission statement to the President on May 5, 2017.

The Board of Trustees reviewed the draft mission statement during its June 2017 meeting. Feedback from President Laura Sparks' listening tour and comments from the June meeting were included in a further revision presented at the September 2017 meeting. At that meeting, the Board of Trustees approved the formation of a working group tasked with editing the final mission statement.

Current Approved Version of Mission Statement On December 20th, 2017, Board of Trustees Chair Rachel Warren announced, via email to The Cooper Union community, that the final version of the mission statement, as developed by the working group, was adopted by the Board of Trustees at their December 2017 board meeting. The texts of the new vision and mission statements are as follows:

Vision

The Cooper Union for the Advancement of Science and Art is dedicated to Peter Cooper's radical commitment to diversity and his founding vision that fair access to an inspiring free education and forums for courageous public discourse foster a just and thriving world.

Mission

Our mission is to sustain The Cooper Union as a free center of learning and civic discourse that inspires inventive, creative, and influential voices in architecture, art, and engineering to address the critical challenges and opportunities of our time.

STRATEGIC PLANNING

Consent Decree (December 2015) On May 27, 2014, the Committee to Save Cooper Union filed a lawsuit with the State of New York to prevent The Cooper Union from charging tuition. This lawsuit garnered the attention of the New York State Attorney General's office, which ultimately brokered a settlement. On September 21, 2015, a consent decree was signed and was filed by the New York Supreme Court on December 16, 2015. The Consent Decree, in part, stated the following:

“Respondents agree that, as part of this Consent Decree, Cooper Union shall attempt to develop plans to return Cooper Union to a sustainable, full-tuition scholarship model that maintains Cooper Union’s strong reputation for academic quality within its Art, Architecture and Engineering programs at their historical levels of enrollment.”

In order to comply with this portion of the Consent Decree, The Cooper Union formed a Free Education Committee (FEC). The FEC was charged to assess whether there are feasible pathways to a sustainable full-tuition scholarship model. The Consent Decree required that two-thirds of the membership be comprised of a combination of elected alumni trustees and student trustees, and that an alumni trustee be chair of the committee. There are also two observers to this committee, one from the faculty and one from the staff.

Additionally, a financial monitor has been appointed by the Attorney General's office to ensure compliance with the Consent Decree. This financial monitor attends all meetings of the full Board of Trustees, Board of Trustees Finance and Business Affairs Committee, and Free Education Committee, as well as other committee meetings. The Financial Monitor also issues its own annual reports.

Formation of the Free Education Committee (January 2016) On January 15, 2016, an email was sent on behalf of the Free Education Committee to inform the community that the Free Education Committee had been officially formed, but was unable to issue the first progress report required by the Consent Decree on that date, as the Attorney General's office had yet to appoint a financial monitor. The Free Education Committee had contacted the Attorney General's office and begun working out a new timetable for compliance with the Consent Decree, and pledged to meet monthly to commence work.

First Status Update of the Free Education Committee (June 2016) On July 1, 2016, the Free Education Committee issued their first status report. This update was to inform the community of the work done towards compliance with the Consent Decree. The Free Education Committee studied several documents pertaining to the institution's financial status, including budget summaries and financial projections prepared by the Vice President for Finance and Administration. They also studied several previous reports produced during the prior administration's term that contained various proposals and suggestions for how to return the school to the full-tuition scholarship policy.

One key finding of this update, which concurred with the financial analysis provided by past Interim President and Vice President for Finance and Administration, Bill Mea, is that the structural deficit, at that time, that needed to be overcome in the absence of charging undergraduate tuition for financial stability, was approximately \$15 million per year (this figure was later analyzed by a financial monitor and found to be between \$11 million and \$25 million depending on the year).

To address this, the Free Education Committee stated they would benchmark The Cooper Union against other institutions, and investigate possible budget cuts. Over the course of the FEC's work, the committee used various financial benchmarks, including the Composite Financial Index (CFI), Cash & Investments to Debt, and Available Cash & Investments to Liabilities Net. The budget cuts would be primarily focused on non-instructional expenditures. The Free Education Committee pledged to spend the following six months studying budget cuts, fundraising opportunities, enrollment levels, and approaches to re-establishing the full-tuition scholarship policy.

Free Education Committee Progress Report (January 2017) On January 15, 2017, the Free Education Committee issued its first full progress report. The main finding of this report was that under the current financial projections, it was possible for the school to return to the full-tuition scholarship policy, while maintaining the institution's financial health and historic enrollment levels. However, under those financial projections, it would likely take until 2039 to return to a sustainable full-tuition scholarship model. The committee stated that it would like to significantly accelerate the return to a full-tuition scholarship model, as it was sensitive to concerns that charging tuition might impact The Cooper Union's reputation for academic quality. In order to accelerate the rate to return to a full-tuition scholarship model, the Free Education Committee identified four possible areas to examine in order to restore the full-tuition scholarship model at an earlier date:

1. Additional revenue generation and expense cutting measures
2. A major capital campaign and/or other fundraising efforts
3. Refinancing debt or other financial engineering solutions
4. Reviewing the cost/benefit analysis of maintaining hard assets

The Free Education Committee studied these and other areas during the 2017 academic year, while it continued to monitor the institution's overall financial condition.

Annual Report of the Financial Monitor (February 2017) One of the terms of the Consent Decree required the presence of an independent financial monitor at all meetings of the full Board of Trustees, Board of Trustees Finance and Business Affairs Committee, and Free Education Committee. Additionally, the independent financial monitor is required to issue its own annual report. Kroll Associates, Inc. (“Kroll”), a corporate investigation and risk management firm, was selected by the Attorney General for this task and officially began their work as the financial monitor on approximately July 1, 2016. Kroll issued its first annual report on Feb. 15, 2017.

The duties of the financial monitor, as specified by the Consent Decree, are as follows:

- summarizing the financial condition of The Cooper Union
- reporting on measures proposed by the The Cooper Union’s Board of Trustees and its committees relating to the Consent Decree, and opining on whether those actions were made in good faith and in the best interest of The Cooper Union
- identifying any non-budgeted expenditures by The Cooper Union exceeding \$100,000 and any non-budgeted contractual obligations of Cooper Union exceeding \$125,000 during the preceding twelve-month period
- analyzing the Free Education Committee (“FEC”) Progress Report, the feasibility of its strategic plan, and the practicality of The Cooper Union’s returning to a full-tuition scholarship model that maintains The Cooper Union’s strong reputation for academic quality within its Art, Architecture, and Engineering programs at their historical levels of enrollment

Kroll’s February 2017 summary of the financial condition of The Cooper Union largely matches the January 2017 analysis of the Free Education Committee, in that the institution was under considerable financial stress. Additionally, the Financial Monitor concluded that the focus must first be on achieving a sustainable level of financial health, and that once the institution becomes a fiscally thriving organization, it can move back to the full-tuition scholarship policy.

Kroll examined numerous specific items in the Consent Decree, ranging from the membership of the Board of Trustees to financial reporting requirements and stated that the Board of Trustees is in compliance with the Consent Decree. Kroll also enumerated the non-budgeted expenditures and contractual obligations over the specified amount.

In Kroll’s analysis of the Free Education Committee’s report, it largely concurred with the findings, but had a major reservation regarding the refinancing and other financial engineering solutions being explored by the committee. Kroll felt that these particular pursuits were unlikely to be achievable, and should be discarded.

Kroll’s final conclusion was that the Board of Trustees, and the Free Education Committee have created an environment and structure that allows them to examine, in an organized and comprehensive fashion, initiatives to improve The Cooper Union’s financial condition and put it on the path to a return to a full-tuition scholarship model.

Response from the Board of Trustees (March 2017) On March 7, 2017, the Board of Trustees issued a response to the Free Education Committee’s interim progress report, and committed to returning to a full-tuition scholarship model while maintaining the long-term financial health of the institution. Additionally, the Board of Trustees concurred with the Free Education Committee and Kroll’s assessment that budget cuts alone will not be sufficient, and that revenue enhancing initiatives must be incorporated.

The Board of Trustees made several recommendations to the Free Education Committee:

1. Expand its community outreach to solicit input on potential initiatives.
2. Provide more regular updates on its progress between now and its final report in January 2018.
3. Work with the Board and other committees to provide more detail on the initiatives explored and the analysis undertaken to review them—i.e., risk, impact on income statement and balance sheet, materiality, investment required to implement.
4. Focus on revenue generating initiatives and, specifically, work with President Sparks and the Alumni Affairs & Development Committee to redouble fundraising efforts to increase support from existing and new sources.
5. Collaborate with other committees of the Board to ensure that concerns of the Financial Monitor regarding governance, productivity and prioritization are addressed and that resources are efficiently utilized for maximum effect. The FEC should focus on the tasks and analyses, which are most likely to have meaningful impact on improving Cooper Union’s long-term financial health, a prerequisite to returning to a sustainable full-tuition scholarship model.

Linking Strategic Planning to Mission and Vision While the Mission Statement was being developed, a process for strategic planning began simultaneously under the leadership of President Laura Sparks, informed by the mission statement and other community and Board discussions indicating likely areas of strategic focus. President Sparks, who started as President in January 2017, spent a large part of her first few months engaging in a listening tour across the campus. A subsequent SWOT (strengths, weaknesses, opportunities, threats) analysis was done in March 2017. The analysis of internal strengths and challenges as well as of external trends and dynamics impacting or likely to impact strategic planning was presented to the Board of Trustees for discussion during their June 2017 meeting.

At the September 2017 Board of Trustees meeting, this analysis was further discussed to include:

- review of the ways in which colleges and universities enhance academic reputation and differentiate to capture funding opportunities
- review of what we need to be successful and the resources and capacities we currently have
- discussion of potential strategic directions for closing the gaps between what we need to be successful and what we currently have

- review of the importance of fundraising and strategic communications
- discussion of potential strategic directions for meeting our goals, addressing academic vibrancy and reputation and funding opportunities

These discussions were in preparation for the development of a strategic plan that will be based on the revised Mission Statement, which was adopted in December 2017.

The President’s Cabinet, which consists of all of the academic and non-academic Deans, meets to discuss various high-level management matters, including strategic planning every other week. The President has also convened a community planning collaborative to ensure that input from faculty members, students and staff is incorporated into the strategic plan. This group met for the first time on May 3, 2017, and continues to meet regularly.

Free Education Committee Recommended Plan (January 2018) In January 2018, the FEC issued their final report and recommendations for the institution to return to full-tuition scholarships for undergraduate students. This report published the financial benchmarking parameters, the metrics used to analyze the current fiscal health of the institution, and the proposed timeline that indicates when The Cooper Union could return to providing 100% full-tuition scholarships to all enrolled undergraduates.

The Free Education Committee calculated that The Cooper Union will need to generate approximately \$250 million in new financial resources (**figure 1.1**) in order to return to full-tuition scholarships and to maintain long-term financial sustainability. The report outlines a number of specific recommendations, guardrails, and additional options left in the “bullpen” that can be considered to achieve these goals. These recommendations, if pursued and successful, project a “return to free” in ten years with expected tuition scholarship increases in as little as two years.

Figure 1.1

FINANCIAL NEED

FINANCIAL NEED (\$000s)

Operating and Capital Reserve	\$152,000
Deferred Maintenance	11,500
Bridge Loan Principal at Maturity	39,000
Post-Retirement Health Insurance	48,000
Total Need	\$250,500

The recommended plan, in summary, consists of:

Revenue Initiatives:

- reduce graduate program scholarships, on average, from 66% to 25%
- increase dorm rate to current market rate
- grow building and facility rentals by 3%
- increase annual ancillary revenue by \$250,000
- increase current-use fundraising by an average of \$1.2 million (25%) annually over the next 5 years and by an average of 11% for the following 5 years

Expense Management Initiatives:

- realize additional savings in annual expense of \$1.2 million by FY20 (reducing rental footprint, increased operating efficiencies, updating employee benefit plans)

Investments in Cooper Union's Future:

- increase annual capital improvement level to address documented deficiencies (increasing to \$2.5 million per year by FY22)
- increase annual investments in current and new academic programs (building to \$3.0 million per year by FY25)

Revised Financial Assumptions:

- increase expected annual growth on tax equivalency payments from 1% to 2% beginning in FY19 to better reflect historical trends and probable future results
- reduce costs associated with severance, President's residence, and consent decree expenses, which were too high included in prior projections, beginning in FY19

Annual Report of the Financial Monitor (February 2018) The Financial Monitor's annual report, was published on February 15, 2018. It reports on the current financial condition of The Cooper Union, measures proposed by the Board of Trustees, the identification of non-budgeted expenditures and obligations, as well as an analysis of the Free Education Committee's Recommended Plan.

Regarding its analysis of the Free Education Committee report, the Financial Monitor wrote, in summary:

“The recently issued report of the FEC entitled, Recommended Plan to Return to Full Tuition Scholarships (“the FEC Report”), soberly discusses the nature and extent of Cooper Union’s financial challenges and calculates the amount needed to enable Cooper Union to return to a full-tuition scholarship model at \$250 million. This is clearly a substantial sum for Cooper Union to raise from its various revenue and support activities. Nonetheless, we concur with the methodology the FEC used to calculate this amount and have concluded that the plan developed by the FEC to achieve its goal, though aggressive, is responsible.”

Board Response (March 2018) These recommendations and report will be reviewed by the Board of Trustees at their March 2018 meeting. If approved, the plan to return to full-tuition scholarships will be a key pillar of the broader strategic plan.

Strategic Planning and Institutional Effectiveness In June 2017, The Cooper Union hired a new Director of Strategic Initiatives and Institutional Effectiveness. This position is part of the President’s leadership team and plays a key role in shaping The Cooper Union’s long-term financial health, academic vitality, and civic leadership. The Director leads the strategic planning process of the institution that cultivates an analytical, empirical, and institutional data-informed approach to problem solving and decision making, as well as facilitating the development of a culture of inquiry, experimentation, and evidence in and for student success. The Director leads initiatives on pedagogical innovation, student retention and success, insight and predictive analytics, federal and state reporting, regional and specialty accreditation reporting, assessment of student learning outcomes, program outcomes, and other relevant institutional priorities. In collaboration with academic leadership, the Director develops and implements a comprehensive system for assessing institutional performance including academic reviews and student learning outcome assessment; and strategic initiatives that increase institutional effectiveness. This position plays a substantial role in ensuring that all branches of the institution are working effectively towards supporting the mission.

IMPACT OF THE CHANGE TO THE FINANCIAL AID MODEL

In light of the recent changes to the financial model and the commitment of the community to The Cooper Union’s mission, measures are being taken to assess effects to the institution’s long-standing commitment to admit students based solely on merit, without regard to financial need, and to engaging these students in a rigorous, high quality education. Key metrics that are established in the Integrated Postsecondary Education Data System (IPEDS), as well as in various ranking composites provide a framework for this analysis, as well as benchmarking and assessment of the educational experience at The Cooper Union.

These measures include:

- selectivity and the quality of students admitted—competitiveness
- student persistence and graduation rates—effectiveness
- net tuition and debt—access and affordability; post-graduation success
- post-graduation success—effectiveness
- social mobility—effectiveness

The Cooper Union will track enrolled student data to explore its effectiveness in recruiting and enrolling diverse students who possess the achievement and potential for admission consideration, and identify opportunities to seat a high achieving and diverse class.

With the introduction of the new financial aid model, concerns were raised that The Cooper Union’s selectivity, ranking, and its long-standing reputation in the promotion of excellence regardless of socio-economic, gender or racial status, would be affected. An analysis of admission metrics suggests that The Cooper Union has maintained a highly selective academic profile, as measured by the achievement information of admitted students. In fact, since 2012, the academic profile of the entering freshmen class has improved slightly, reflected in the trending of the academic index (**figure 1.2**). First term mean college GPA, which is strongly linked to persistence and degree completion, has been fairly consistent since 2012; although there is a very slight downward shift. Other effects are currently being explored. For example, student performance in gateway courses may offer insight into how improvements, commensurate with student potential, can be achieved.

Figure 1.2

ACADEMIC PROFILE BY COHORT

	Head Count	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹
COHORT 2012	185	91.8	683	646	652	2899
COHORT 2013	186	91.5	691	652	666	2924
COHORT 2014	214	92	700	646	652	2918
COHORT 2015	230	92	697	652	652	2921
COHORT 2016	219	93.2	691	650	644	2917

¹ Academic Index= 10*(HSGPA) + SATM + SATCR + SATW

Although significant shifts in the academic profile of the entering freshman classes have not been noticed, demographic shifts have occurred.

- In 2012 and 2013, women comprised, on average, 34% of the entering class. In the period 2014-2016, women comprised, on average, 30% of the entering class. Losses were most significantly noted in engineering where women comprised, on average, 25% of the entering class in 2012 and 2013, and on average, 18% of the entering class in 2014-2016.

- In 2012 and 2013, underrepresented minorities (URM) comprised, on average, 18% of the entering class. In the period 2014-2016, URM comprised, on average, 18% of the entering class. However, URM enrollment in the School of Engineering fell from an average of 10% in 2012 and 2013, to an average enrollment of 8% of the entering class in 2014-2016.

A detailed analysis of this data is already shaping an understanding of the institution’s student profile—the students’ progression patterns, underlying impediments to their performance and/or progression, and targeted opportunities to better engage and support them. Regular, term, and annual assessments of these measures are planned to equip The Cooper Union with baseline information to assess its progress and effectiveness, and benchmark performance against that of peers and aspirational peers to identify opportunity for improvement strategies. Planned analysis, assessment, and evaluation will enable the institution to create an educational experience that will promote persistence and graduation beyond levels predicated on selectivity measures.

Recent analysis of student progression patterns since 2012–2016 (figure 1.3) shows that The Cooper Union’s first year persistence rates are consistent with those of its selective peers. However, benchmarking data reflect that The Cooper Union’s graduation rates, although high (approximately 85%), are lower than those of its competitive peers. Term-by-term persistence analysis has determined that second year persistence rates in 2012 and 2013 are nearly equal to those of the first year. Therefore, there is an identified need for a deeper dive into progression patterns in the second year, including performance and gateway course outcomes. The Cooper Union will track enrolled student data to explore its effectiveness in recruiting and enrolling diverse students who possess the achievement and potential for admission consideration; and identify opportunities to seat a high achieving and diverse class. First year attrition typically accounts for 50% of all attrition, with the remaining 50% typically spread over the remaining three years. Thus, a comprehensive leaver analysis is underway to explore what may be behind the attrition of highly qualified students of high potential.

Figure 1.3

RETENTION BY YEAR AND TERM, GRADUATION, PERSISTENCE AND ATTRITION RATES OF FIRST-TIME, FULL-TIME STUDENT COHORTS

	Original Count from Admissions	Year 1		Year 2		Year 3		Year 4		Year 5		Graduated	Enrolled in Last Spring Term but not Graduated	Persistence	First-Year Attrition	Second-Year Attrition
		Fall ²	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring					
Cohort 2012	185	100%	97.3%	93.5%	90.8%	87.0%	89.2%	83.2%	87.0%	14.6%	12.4%	85.4%	2.2%	87.6%	6.5%	13.0%
Cohort 2013 ³	187	100%	98.4%	94.1%	93.5%	89.8%	88.7%	83.3%	88.2%			69.4%	19.9%	89.2%	5.9%	10.2%
Cohort 2014 ⁴	218	100%	97.7%	91.6%	88.8%	79.0%	76.2%						76.2%	76.2%	8.4%	21.0%
Cohort 2015	232	100%	96.5%	91.3%	89.1%								89.1%	89.1%	8.7%	
Cohort 2016	220	100%	98.6%										98.6%	98.6%		

1 - Persistence is defined as the number of students Graduated plus the number of students enrolled in last spring semester listed but who are not graduated.

2 - Year 1 Fall Headcount is used as Cohort Baseline to calculate retention, graduation, persistence and attrition rates.

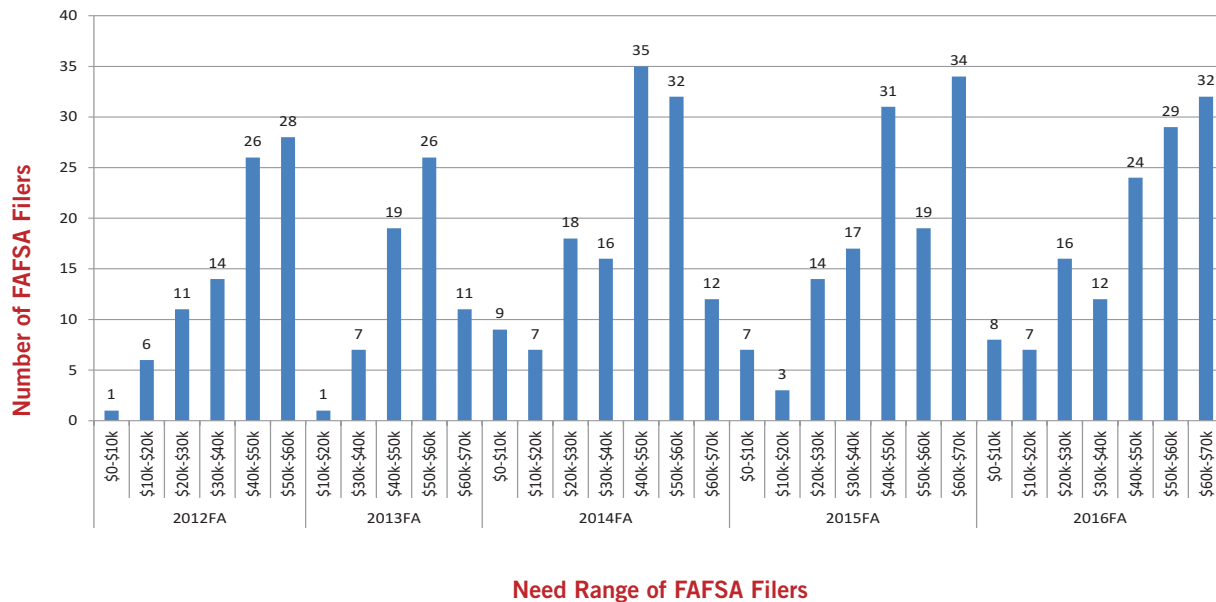
3 - One student labeled start term FA2013 however the student data shows deferral with start in FA2014 and enrolled full-time. Student removed from Cohort 2013 and placed into Cohort 2014.

4 - Cooper Union will track enrolled student data to explore its effectiveness in recruiting and enrolling diverse students who possess the achievement and potential for admission consideration; and identify opportunities to seat a high achieving and diverse class.

Data on FAFSA filers in cohorts 2012–2016 (figure 1.4) suggests that The Cooper Union continues to meet the vision of its founder by providing a high-quality education to high-achieving students with high financial need.

Figure 1.4

NEED BY YEAR 1 AND COHORT



RANKING

US News and World Report, *Forbes*, and *Niche* rankings assemble, to varying extent, critical college information (selectivity, resources, student success and/or affordability) shaping public perception of the quality of education offered at The Cooper Union.

- Based on 2014 IPEDS data, The Cooper Union was ranked #1 in *Best Colleges for your Money* by *Niche* (which also gave The Cooper Union an A+ rating). The Cooper Union gained position in the *Forbes* ranking, from #92 in 2016 to #62 (out of 660 schools sampled) in 2017. *Forbes'* methodology pulls extensively, and weights, output data such as that provided by the Center for College Affordability and Productivity and Payscale, as well as assessments of alumni leadership. It places a premium on the direct benefit the university provides its students.
- For two straight years, both in 2017 and 2018, The Cooper Union held the #1 in Regional Colleges North position in the *US News and World Report* ranking. This was a gain from #2 in Regional Colleges North in 2016. However, because complete CDS financial data was not submitted in 2017 for the 2018 ranking, The Cooper Union was not ranked in 2016-2017 with regard to a “Best Value” status. The Cooper Union had been ranked #1 Best Value Regional (North) in 2016 and 2017.

The Cooper Union's reputation has been linked in part to its selectivity, and in part to the opportunity it creates for socio-economic impact by supporting degree achievement among students of high financial need and diverse backgrounds. However, the programs of study in Architecture, Art, and Engineering, its curriculum and pedagogy, and the first destination outcomes of students are crucial elements of The Cooper Union educational experience.

SUPPORT OF THE MISSION

The Irwin S. Chanin School of Architecture The School of Architecture has several processes in place to maintain its strong academic reputation. At the highest level, the Dean of the School of Architecture is a member of the President's Cabinet, and therefore participates in strategic planning at that level. The architecture school has faculty meetings 2-4 times per semester, and has four standing committees: administrative, admissions, curriculum, and academic standards. These four committees work to ensure that the curriculum is cutting-edge and vibrant, that students are admitted with the competencies needed for successful engagement in the first term and that they are supported and retained, and overall to ensure the academic reputation of the school. These committees present their findings to the faculty and dean of architecture as needed. Additional sub-committees are formed as new challenges and opportunities emerge. The architecture school relies heavily on this committee structure for the proposal and evaluation of new initiatives.

Assessment of student outcomes and experiences provide a potent perspective as to the program's impact. The assessment practices in the architecture programs are varied, including outcome assessment of student work, focused discussions with students as to their experience, and first destination placements.

The most significant type of academic evaluation is in the form of critiques, held roughly twice per semester. In these critiques, faculty from the architecture school, as well as invited guests from outside the school, critique all of the students work. Additionally, there is a large end-of-year show, in which work from the entire school is presented, open to the general public. This allows for a critical examination of cohort outcomes with a view of how student work evolves over the entire curriculum, showing the linkage between the curriculum and student progression. These critiques, while somewhat informal in the sense that no data are collected, are critical to the operation of the school. Each student's work is assessed individually and afford the opportunity for personalized guidance. The critiques provide students and faculty with immediate feedback on the projects, and faculty work with students to incorporate this feedback. The end-of-year show is also critical as it is a very well attended event, and is a substantial contribution to maintaining the reputation of the school.

The Dean and Associate Dean meet at the end of the year with each class-year, and have a discussion about the results of the entire year. This is a formal process, and the results are recorded and distributed to the faculty of the architecture school.

The School of Architecture monitors the placement of its graduates in employment and graduate school, and is accredited by the National Architecture Accreditation Board.

The School of Art The School of Art is committed to its own mission statement, which builds upon, and enhances the school's latest mission statement. The mission statement of the School of Art is as follows:

“The mission of the School of Art is to educate artists in the broadest sense, both as creative practitioners engaged with a wide range of disciplines in the visual arts and as enlightened citizens of the world who are prepared to question and transform society.”

The Dean of the School of Art is a member of the President's Cabinet and has an active role in defining the vision and strategic plan. At the faculty level, the school has several faculty meetings per semester. Additionally there are four standing committees: administrative, admissions, academic standings, curriculum, as well as tenure and promotion. These standing committees as defined by governance continually plan and develop curriculum, set degree standards for graduation, discuss and vote on criteria for admissions, and are advisory to the Dean on the matters of strategic direction and budget allocation to support the school of arts academic programs.

The School of Art has mid-semester and final critiques, which are essential to the conservatory based pedagogy in the studio classes. The School of Art participates in the end of year show (initiated by the School of Art and Architecture in 1973) which publicly showcases the work from all areas of concentration as well as the formative Foundation program. The School of Art has a capstone graduation requirement of a public presentation of their work in the senior year. These public exhibitions, which are presented weekly throughout the year, serve as a focus for evaluation from many faculty points of view. These student exhibitions, along with thematically curated guest exhibitions, are a significant contribution to the education of the student body.

The School of Art also hosts numerous exhibitions open to the public year-round. Many of these exhibitions are student work, and are an integral part of maintaining the academic reputation of the school. Additionally, many invited artists have exhibitions in conjunction with the School of Art. These exhibitions are a significant contribution to the mission to contribute to an informed civic discourse in the city of New York. The School of Art also monitors the placement of its graduates in employment and graduate school, and is accredited by the National Association of Schools of Art and Design.

The School of Engineering Similar to the other schools, the School of Engineering has several processes in place to ensure the academic reputation of the school. At the highest level, the Dean of Engineering sits on the President's Cabinet and participates in all operational and strategic planning meetings.

At the faculty level, the school has several faculty meetings per semester. Additionally there are several standing committees: admissions, academic standings, curriculum, and tenure and promotion.

There are four degree-granting departments in the school of engineering: chemical, civil, electrical and mechanical engineering. Additionally there are three service (non-degree granting) departments: chemistry, math and physics. Four of its undergraduate degree-granting programs (chemical engineering, civil engineering, electrical engineering, and mechanical engineering) are accredited by the Engineering Accreditation Commission of ABET. Each department elects a chair who serves for three-year periods. These chairs call departmental meetings and oversee the ABET accreditation process. During the ABET accreditation process, the departments review their mission, goal and the relevant data to assess if their goals are being accomplished. This typically involves parsing alumni data, such as job placement, salaries, and graduate degree attainment. Additional programmatic assessment occurs via invited guests to senior project or other course presentations. These forms of direct and indirect assessment ensure that the school maintains its high quality of programs.

The engineering school also hosts an end-of-year show, highlighting projects from all majors, across all levels, in which the general public is invited. Additional events, such as the “From the Labs” series, where research clusters are presented to invited guests from industry, are held. These public facing events help to ensure that the school maintains its strong reputation. The School of Engineering also monitors the placement of its graduates in employment and graduate school.

The Library The library’s mission statement is:

“The Cooper Union Library provides research and academic support for the three degree-granting programs of The Cooper Union. This support is manifest in the Library’s varied Collections and subscriptions, which include a substantial portion of electronic resources, as well as in its policies and programs designed to instill lifelong learning skills. The Library also functions as an institutional crossroads, in which students and faculty from across the college’s spectrum can meet and learn from each other’s disciplines and resources.”

The library acts as an interdisciplinary crossroad for students, as it is one of the places in the institution that students from all three schools use. Although most students come to the library to access the books and journals, the usage of the library depends somewhat on the student. The art and architecture students typically rely more heavily on the physical media, whereas the engineering students typically need access to textbooks that are placed on reserve, or access to online databases. The online database access is available campus wide, but the library is responsible for managing the subscriptions.

The library includes the Cooper Archives, which identify, preserve, and make available records of enduring value. Responding to research inquiries to the Archives is a substantial workload—last year there were over 600 inquiries; 50% of which come from students, faculty, and the administration.

The library regularly participates in campus-wide assessment and strategic planning activities, as it supports three distinct schools, with three different accrediting bodies. Additionally, it hosts many student exhibitions.

Office of Admissions The Office of Admissions' responsibilities include assembling the incoming class for the School of Engineering and providing logistical support for the applicants reviewed and submitted for admission by the Faculty committees of the Schools of Art and Architecture. The Office of Admissions notifies the incoming class of students, provides counsel during the decision process, and administers the packaging of financial aid. Consistent with the Mission Statement, the Office of Admissions supports an admissions process based solely on the basis of merit and potential as defined within each of the three professional schools. Additionally, to ensure compliance with the Consent Decree, the Office of Admissions monitors current enrollment levels, and compares them against historical data.

To self-assess the office's role in supporting the mission of The Cooper Union, there are several processes in place. First, the Vice President of Enrollment Services sits on the President's Cabinet, and reports directly to the President. This ensures that all of the Academic Deans and senior leadership have opportunities to provide direction to the admissions office.

The Office of Admissions meets with the curriculum committees of each school during the academic year. In these meetings, they discuss recruitment goals and the desired profile for the incoming class. The admissions office works with the three schools to define what merit and potential mean in the context of their particular academic discipline. At the end of the academic year, after admissions decisions have been made and accepted, the department has loop-closing meetings with all of the admissions committees.

Internally, the Office of Admissions has additional procedures in place to self-assess. The office benchmarks institutional admissions data against that of other comparable schools around the country and uses this data to aid the discussion on admissions standards with the three schools.

Office of Student Affairs The Office of Student Affairs is led by the Dean of Students, and has a wide range of responsibilities. These services include: Career Development, Residence Life, Athletics, Campus Life, Health and Medical Records, Counseling Referrals, Student Support and Advocacy, Student Judiciary, Student Clubs and Organizations, Orientation Programs and Commencement. The Office of Student Affairs maintains an accessible presence and organizes events relating to student well-being, satisfaction, and enjoyment on campus.

The Center for Career Development The Center for Career Development, which is part of the Student Affairs Office, helps students make a successful transition from their academic studies to professional practice. The center has two main goals; the first is to supplement support what is necessary for professional success that might not be directly present in the academic programs. This can include networking opportunities, job boards, Fulbright information sessions, self-assessment personality tests, résumé writing workshops, mock interviews, support for travel to professional conferences, alumni mentoring, and directly supporting paid internships for art students. The second main goal is to assist students in finding employment or entrance into a graduate program following graduation. To do this, they hold career fairs, host companies who wish to recruit on campus, and provide graduate school information sessions. These activities ensure that Cooper Union students will be successful after graduation, and this helps to solidify the institution's strong reputation.

The center assesses itself yearly by conducting a “next destination” survey, which tracks where students go following graduation from The Cooper Union. The center is also a member of several professional organizations such as the Council for Advancement of Standards and National Association of Colleges and Employees. These professional organizations provide data which the center can use for benchmarking, ensuring that placement rates with employers and graduate schools are consistent with national standards.

The CV Starr Research Foundation The CV Starr Research Foundation is a separate, but wholly owned, corporate entity from The Cooper Union. It is the clearinghouse and managing agent for public and privately funded money for student faculty project and research work. Currently, the management structure of the Foundation is being reorganized and restructured.

The role of the CV Starr Research Foundation is to help at any point, from the proposal stage to the fulfillment stage, of any project work at The Cooper Union that is publicly funded, privately funded, or is hybrid partner funded. This work may involve a Cooper Union faculty member as the primary investigator (PI), or the faculty member could be a co-PI at another institution that has subcontracted The Cooper Union.

The Foundation ensures that all projects fit the mission and the vision we have for our students and their educational process. The Foundation will not facilitate projects that are simply labor projects for students; there must be some educational benefit for any student participating in the project.

The Foundation also manages the intellectual property (IP) process for the college. It interacts with attorneys regarding any litigation over process or procedure involving the patents that The Cooper Union holds or licenses. It also facilitates technology transfer from the institution to industry. The Foundation has sold a few patents in the past few years, and is looking to sell a few more in the future to help provide an additional income stream for the institution. The Foundation measures its success by analyzing the amount of funds it receives for projects and the percentage of faculty working on projects. Additionally, it examines the diversity of project work being done, to ensure there is a wide range of opportunities for students.

CHAPTER II: ETHICS AND INTEGRITY

INTRODUCTION

There is an expectation within institutions of higher education that the actions of all individuals are guided by the principles of ethical behavior and integrity. It is important for members of the institution, including administration, faculty and students, to create an ethical, honest, and respectful community. The process to develop and implement policy is also crucial to developing transparency and mutually agreed upon goals and practices. This community trust will further shape the shared governance promoted in the Consent Decree and reinforced through future strategic planning initiatives.

Several policies of The Cooper Union offer guidance as to the expectation of a culture that promotes honesty and respect. This culture requires accountability to mutually developed and agreed upon values. In this section of the Self-Study Report, a critical review of the institution's policies and procedures that govern ethical behavior across The Cooper Union community was performed in order to confirm that The Cooper Union meets compliance with the following standard regarding ethics and integrity, as defined by the Middle States Commission on Higher Education (MSCHE):

“Ethics and integrity are central, indispensable, and defining hallmarks of effective higher education institutions. In all activities, whether internal or external, an institution must be faithful to its mission, honor its contracts and commitments, adhere to its policies, and represent itself truthfully.”

FEDERAL POLICIES

The Cooper Union is committed to providing a working, learning, and living environment free from unlawful discrimination and harassment and to fostering a nurturing and vibrant community founded upon the fundamental dignity and worth of all of its members. It complies with Title IX of the Education Amendments of 1972, Title VI and VII of the Civil Rights Act of 1964, and Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, as amended, the Age Discrimination Act of 1975, and applicable federal, state, and local laws. The Cooper Union does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity or expression, age,

disability, national or ethnic origin, military status, marital status, partnership status, familial status or any other legally protected characteristic, in admissions, financial aid, or employment practices, or in the administration of any educational program or activity. The Policy Against Gender-Based Discrimination, Harassment and Sexual Misconduct is in compliance with federal guidelines and the Disability Accommodations policy is in compliance with state and federal guidelines.

The protections and policies associated with regulatory requirements also support professional ethics and honesty by establishing standards and support for a healthy and inclusive campus. Federal requirements guide how the school is to discharge federal financial aid, establishing how students and staff will honor their responsibilities in the financial aid process.

Students' rights and responsibilities, as well as those of The Cooper Union, are provided on the Financial Aid website. The Cooper Union requires its officers, trustees, employees, and personnel to maintain high ethical standards and fully comply with federal financial aid standards regarding the discharge of their duties and responsibilities. The Cooper Union is committed to not only comply with all applicable laws and regulations, but to practice honesty and integrity while doing so. The Code of Conduct for the administration of federal financial aid is published prominently on The Cooper Union website.

INSTITUTIONAL POLICIES

Several institutional policies and practices uphold the value for fair and ethical treatment within the classroom, and among faculty, staff, and students. These include: complaint, appeal, and grievance processes. These processes are crucial in fostering accountability, trust, and transparency regarding core values and respect. The ability of The Cooper Union's constituents to advance a concern not only provides an opportunity for corrective actions, but through tracking and monitoring concerns, there is opportunity for total quality management and culture-building.

The centralized management of appeals through the Office of Student Affairs or Human Resources affords the opportunity to not only track and monitor progress on student issues, but to also identify trends and areas of concern. These concerns are brought forward, as appropriate, to the President. If personnel issues are involved, the Management Council is engaged to weigh in on the quality of business practices and operations. The Deans of the Schools of Architecture, Art, or Engineering and/or Cabinet may be consulted if the issues raised are concerning the quality of the academic experience. Academic issues are addressed by the Deans in consultation with the President and Office of Human Resources and other members of Cabinet as necessary and appropriate.

COMPLAINT PROCEDURE

Given the importance of complaint processes to guide a culture of total quality improvement, The Cooper Union is currently working toward creating a more formal complaint/grievance process. In addressing student complaints, The Cooper Union strives to respect the concerns of the complainant and respondent, and any other parties involved, while fully addressing the underlying events leading to the complaint.

A student complaint is defined as an academic or non-academic issue that a student has with a faculty/instructor, staff member, administrator, or department or program of The Cooper Union. Students are encouraged to advance their complaints to the Dean of Students. The Dean of Students shepherds the appeal to the appropriate academic or administrative officer for response and resolution as laid out in the Student Complaint Process. Accountability and timeliness are established through process and monitored by the Dean.

Student complaints concerning behavioral concerns or issues with another student must be addressed through the Student Code of Conduct. Complaints pertaining to issues of gender-based discrimination, harassment, and/or sexual misconduct must be addressed through the processes established in the Policy Against Gender-Based Discrimination, Harassment, and Sexual Misconduct also available on the website.

PLAGIARISM

Plagiarism is treated as the false assumption of authorship—the act of taking another person’s language or thought, or language or thought from an anonymous source—and presenting it as your own. Plagiarism may take many forms which are provided for in the Plagiarism policy statement available on The Cooper Union’s website.

Acts of plagiarism, whether they are done intentionally or unintentionally, on any essay, examination, exercise, report (including oral reports), or other type of writing assignment, are considered by The Cooper Union to be a “dishonest” representation in a student’s work, and thus impact the assessment of the work as representing the student’s original ideas, interpretations, etc. However, the policy also provides opportunity to grow the student’s understanding of the standards by which original work is reviewed, and guide their ability to meet standards by providing the means by which they can honestly attribute scholarship of others.

CONFLICT OF INTEREST POLICY

It is important that true or perceived conflicts of interest are responded to with openness and transparency. There is a clearly stated conflict of interest policy and questionnaire for the Board of Trustees and other “key employees.” These questionnaires are administered annually by the Secretary to the Board of Trustees. The Audit committee of the Board of Trustees then reviews any questionnaires that might have any appearance of conflict. The Board recently performed a comprehensive review of the conflicts of interest policy and approved a new, more comprehensive policy in December 2017.

Currently there are no other explicitly stated conflict of interest policies across the institution. For example, the concept of conflict of interest does not appear within the three union contracts. One implicit example exists within the Student Code of Conduct, where it is stated that Dean of Students will review a list of potential panelists to the Student Judicial Panel to make sure that there is no prejudice on the part of the panelist with either the complainant or the accused.

STUDENT CODE OF CONDUCT

The Student Code of Conduct has appeared in the Student Handbooks since the 1960s. Originally titled as a “Code of Fair Practice,” versions of the Student Code of Conduct have included rights to scholarly, artistic, and intellectual freedom. These freedoms have been endorsed not only in the handbook, but also upheld by the faculty of The Cooper Union in their courses. The freedom for disparate ideas and creative expression is strongly held. The Code of Conduct also promotes freedom from bias, an important feature of student’s responsibilities in the Student Judicial Panel, ensuring that prejudice does not taint a fair hearing for the complainant or the respondent. The concept of maintaining a set of standards to hold the community accountable to “upholding the rights and dignity of all members of [the] community” is modeled by the Office of Student Affairs and moreover, is an emerging value of the Diversity Task Force.

The most recent Code of Conduct was revised in April 2017. It outlines the rights of the student body, as well as expectations of student behavior. Included in this latest revision is a procedure for future revisions, establishing that the process for policy changes must include faculty input. Bringing various perspectives to bear on substantive changes fosters the development of robust policies, builds stake, and guides policy implementation.

INSTITUTIONAL REVIEW BOARD

The Institutional Review Board of The Cooper Union (IRB-CU) has the responsibility for the oversight of all research and surveys involving human subjects, which are conducted by faculty, students and/or staff associated with The Cooper Union. The goal of this oversight is to protect the rights, privacy, and welfare of all human participants in research while respecting, supporting, and enhancing the responsible and ethical scholarship activities of the faculty, students, and staff.

To achieve this goal, in accordance with Federal law and institutional policy, the IRB-CU has the authority to review, approve, modify, or disapprove protocols submitted by faculty, staff, and student investigators which involve surveys and research on human subjects, as well as to monitor and review their progress. The review and monitoring processes are guided by federal regulations and rules, as well as federal, state, city, and applicable contractual laws. The IRB-CU has reviewed an average of ten research projects and surveys each year for the last five years.

COLLECTIVE BARGAINING AGREEMENTS

There are three separate unions at The Cooper Union that represent and negotiate with respect to the working conditions for the faculty and staff. Union negotiations shape honest dialogue, transparency, and agreement as to expectations and quality of work. The unions broker transparency regarding employment practices including hire, fair treatment by supervisors (academic or otherwise), fair and safe working conditions, and freedom from bias.

All are local sections of New York State United Teachers (NYSUT) and are affiliated with the American Federation of Teachers (AFT) and the National Education Association (NEA). The Cooper Union Federation of College Teachers (CUFCT) has been certified as the bargaining agent for the full-time faculty and librarians since 1974, The Union @Cooper Union (UCU) was recognized in 2005 to represent the full-time and regular part-time staff in clerical, administrative, technical, and buildings and grounds/maintenance positions, and the Cooper Union Organization of Part-time Faculty (CUOP) was recognized in 2009 to bargain for the proportional and adjunct faculty at The Cooper Union. In August 2017, the CUFCT ratified its 2016-2019 contract. Both the CUOP and the UCU began negotiations for new contracts in fall 2017.

ACADEMIC FREEDOM, FREEDOM OF EXPRESSION, AND GRIEVANCES

In the collective bargaining agreements with the CUFCT and CUOP, there are explicit policies on academic freedom that are provided in the contracts. In addition to these policies, there is a section in the Student's Code of Conduct listing the academic freedom rights of the student, which include, but are not limited to, "freedom to engage in free discussion, inquiry and expression" and "the right to express views on issues of institutional policy." There is no statement within the contract of the Union @ Cooper Union about academic freedom and/or freedom of expression.

Grievance policies are described in detail within all three union contracts. In the CUFCT contract, there are Articles describing procedures for both academic freedom grievances as well as grievances of a procedural nature, with details outlining the timeline for the filing of a grievance, as well as a timeline for response by the Cooper Union. The same timelines are provided in the CUOP contract, although there is no separate Article for the academic freedom grievances. In the UCU contract, there is a slight difference in the time allowed to file a grievance, but otherwise the timeline of the process is relatively the same. There is no inclusion of the concept of an academic freedom grievance in the UCU contract.

Although these academic freedom statements and grievance procedures are clearly stated in the collective bargaining agreements, there is currently no assessment done to evaluate the effectiveness of these procedures. If necessary, any changes to the contract language would have to be negotiated between the unions and The Cooper Union.

Unlike the members of the three unions, there are few written policies that pertain explicitly to non-union staff members and administrators. When new staff members are hired, they receive an "employment at will" offer letter and a summary of their benefits. When the Staff Handbook is fully updated, they will receive a copy of that as well. There is currently no written grievance procedure for non-union staff and administrators.

INTELLECTUAL PROPERTY

The Intellectual Property rights of members of The Cooper Union community is one area that the institution currently has no established written institutional policy. However, there is strong interest among multiple parties (e.g., administration, faculty, students) at The Cooper Union to develop a formal written policy on intellectual property. Discussions have already begun to develop a policy that supports the intellectual property rights of members of The Cooper Union.

Students who develop intellectual property on campus, for example, participants of the Invention Factory, sign agreements about the work product of their participation. There are multiple agreements that all students, or their parents/guardians, if they are minors, sign when they enroll at The Cooper Union. One of these agreements gives The Cooper Union the right to use images and representations of work in publications while the student retains all legal copyright, and the other allows The Cooper Union to use photographic and audio/video representations of the students.

HUMAN RESOURCES

Starting in fall 2017, the Human Resources department has made significant strides in providing better services and more streamlined hiring processes; for example, jobs are now regularly posted on the web site. The Staff Handbook is currently in the end-stages of being updated, with an effort to include references to all policies across bargaining units and non-unionized employees. The updated Handbook will be vetted by outside counsel to verify that the policies not only describe current best practices, but that the policies represent compliance with labor law. The intent is to set up a structure where the Handbook can be updated as changes to labor law occur. Employees will receive emails regarding the changes, and then annually they will have to acknowledge receipt of an updated Handbook, which will be provided also in print format.

The Director of Strategic Initiatives and Institutional Effectiveness will work with the Human Resources department to create a clearinghouse of the policies. This collection will lead to more straightforward access and to greater dissemination and understanding of each individual policy.

DIVERSITY AND INCLUSION TASK FORCE

Following the generation of a report by the Faculty-Student Senate regarding issues of gender diversity, particularly in the student body of the School of Engineering, the Office of the President instituted the Diversity & Inclusion Task Force to examine these broad issues throughout the community. The task force was formed in fall 2017 and is currently organizing itself into specific working groups in order to best investigate different issues regarding diversity across the campus. These working groups include:

- grow compositional diversity
- explore campus climate
- identify instructional practices, pedagogy, and curriculum
- develop first year experience
- grow the diversity of faculty and staff
- institutional effectiveness

FINANCIAL AID

The Office of Financial Aid works with students and their families to meet the financial requirements of The Cooper Union, as well as assisting them to apply for and obtain loans, grants, scholarship and other forms of financial assistance. Available on the website is a written Financial Aid Code of Conduct for the staff and a comprehensive list of Student's Rights and Responsibilities in regard to Financial Aid. The Financial Aid webpage lists all the policies and procedures, as well as providing links to websites with tools that estimate the net price of college and other useful external sites.

OFFICE OF COMMUNICATIONS

The Office of Communications works closely with many of the administrative units to provide support in writing and publicity. They meet regularly not only with the President's Office, but also with the Cabinet, and the Offices of Development, Admissions, and Alumni Affairs. The intent of these meetings is to ensure that the messaging of the Office of Communications stays focused and appropriate.

When the Office of Communications is asked to create a publication or document, the staff works to do their due diligence to provide the most accurate document possible. They fact check, do research, and ask for multiple sources, whenever possible.

After The Cooper Union's website was redesigned in 2011, there was an Editorial Working Group that met monthly for several years in an effort to continue to expand and support the redesigned website. Over time, several of the Schools have taken on some of the tasks of adding content and updating the news streams in their subject area. This has sometimes led to less consistency of the published content. As the use of other social media platforms has increased among the different departments in the institution, some control of institutional messaging has also left the Office of Communications.

More recently, some of the design work associated with publications and similar media are now under the purview of the Office of Communications due to cost-cutting measures, as well as ensuring that partnerships with outside vendors are properly maintained. These changes to the operations of the Office of Communications have increased its workload. Currently, there is a search underway for a new Director of Communication and Public Programs to replace the prior VP Communications. The Director will oversee the Office of Communications, the programming of the Great Hall, and the rentals of The Cooper Union's facilities.

THE BOARD OF TRUSTEES AND THEIR COMPLIANCE WITH THE CONSENT DECREE

The Free Education Committee (FEC), mandated by the Consent Decree, has been meeting regularly since its founding in 2015 and has been reporting to the community every six months. The By-laws of the Board of Trustees were amended in November 2015, including the changes to the membership and the election procedures, as detailed in the Consent Decree. In July 2016, the Attorney General's Office selected Kroll Associates to serve as the Financial Monitor for The Cooper Union.

The measures taken by the Board of Trustees and its committees to comply with the Consent Decree have been reviewed by the Financial Monitor. The most recent 2018 Annual report of the Financial Monitor states that

“The Cooper Union Board adopted a number of resolutions to the Cooper Union bylaws to comply with the various provisions of the Consent Decree. We believe that the Board acted appropriately, in good faith and in the best interests of Cooper Union.”

Examples of measures taken by the Board of Trustees and its committees to comply with the Consent Decree include:

- revising by-laws
- appointing an alumni trustee as the Chair or Vice-Chair of the Board of Trustees
- confirming the nomination of two student trustees
- confirming the nomination of alumni trustees
- including faculty and staff representatives as observers and advisers
- making a good faith effort to recruit additional Board members
- creating a Free Education Committee
- forming a Governing Committee
- making Board meeting minutes promptly available on The Cooper Union's website
- making annual statements regarding financial performance of the institution

In order to help ensure that the Board of Trustees complies with the Consent Decree, outside counsel has conducted governance trainings, including a review of trustee responsibilities and best practices. Although this was largely in response to the Consent Decree, the President and Chair of the Board of Trustees intend to bring in an outside firm to continue this type of training. The Board of Trustees has recently formed a Governance Committee, as described in the revision of the By-laws, to oversee the governance of the Board.

CHAPTER III: DESIGN AND DELIVERY OF THE STUDENT LEARNING EXPERIENCE

INTRODUCTION

As one of the most selective colleges in the nation, The Cooper Union for the Advancement of Science and Art provides students with a rigorous, world-class education in architecture, art, and engineering, and outstanding studies in the humanities and social sciences. The college's small size (of approximately 1,000 students) and unique focus, provide an intellectually grounded, creative environment in which faculty and students effectively interact. Students of all three schools work collaboratively and individually, in close proximity in classrooms, labs and studios. Within this fertile environment, students utilize their individual talents, exchange ideas, collaborate on research and experimentation, engage in discussions and critique, learn to communicate effectively, and establish a foundation for life-long learning.

The information gathered during the self-study process exhibited four critical elements describing the student learning experience at The Cooper Union. It was clear that in each of the three schools, the following elements were critically important in describing the student learning experience:

- the uniqueness of the college's history and bond with the founding principles
- its small size within a culturally rich, world-class city
- the care taken by the faculty, individually and in committees, to keep the curriculum cutting-edge, innovative, and at the same time, foundational
- the availability of labs and individual workspaces in which experimentation and innovation can take place

In this section of the Self-Study Report, a critical review of the institution’s educational offerings was performed in order to confirm that The Cooper Union meets compliance with the following standard regarding the design and delivery of the student learning experience, as defined by the Middle States Commission on Higher Education (MSCHE):

“An institution provides students with learning experiences that are characterized by rigor and coherence at all program, certificate, and degree levels, regardless of instructional modality. All learning experiences, regardless of modality, program pace/schedule, level, and setting are consistent with higher education expectations.”

THE COOPER UNION IN NEW YORK CITY

Peter Cooper’s vision and the compelling history of The Cooper Union permeate through the walls of the college. The values in which the Founder believed, an education “equal to the best” without regard to class, gender or race in the promotion of an enlightened citizenship, is the commitment to which faculty and student still strive. The Great Hall, upon which the Foundation Building was constructed, has been a bedrock for debating urgent issues of the day since its opening in 1859. It is no accident that students of The Cooper Union see themselves as actively engaged citizen-scholars. The privilege of studying at The Cooper Union brings with it important responsibilities. Students are entrusted with using their education to “make enlightened contributions to society.”

The Cooper Union is a small college set within Manhattan—an expansive, culturally rich city with abundant cultural and financial resources. The small size of the school enables the faculty to effectively interact, often on a close individual basis. The greater New York Metropolitan area is an extension of the college where students are able to have direct and meaningful cultural experiences. New York’s landmark buildings, world-class museums, cutting-edge galleries, state-of-the-art hospitals, research labs and massive infrastructure projects extend the educational prospects from the classroom to the larger society. Students have frequent opportunities to interact with major figures in architecture, art, engineering, as well as numerous other disciplines.

Faculty and students, who benefit from being in New York, also contribute to the life of the city. Students are encouraged to seek meaningful internships within the tri-state area and many of them work on projects that impact New York City communities. Some examples include: pioneering work in making the Metropolitan Museum of Art more experiential to the visually impaired by a recent graduate of the School of Art, a collaborative project with engineering students at Montefiore Hospital involving sleep apnea, a Light Studio project at a school bridging the deaf and hearing communities, a Mobile Market Stand for the Brooklyn Transition Center, a new strategy for visually-impaired pedestrians to navigate through New York City’s construction zones proposed by architecture students, and many others. Alumni from all three schools are at the forefront in addressing pressing social and societal concerns in New York City and beyond.

THE 2016-2017 ACADEMIC YEAR STUDENT PROFILE

During the 2016-2017 academic year, the following students were enrolled:

- 482 undergraduate and 75 graduate students in the School of Engineering
- 261 undergraduate students in the School of Art
- 125 undergraduate and 13 graduate students in the School of Architecture

THE FACULTY

The faculty, designated and guided by governance and recognized by the administration, is the collegial group responsible for the design and development of the educational programs of The Cooper Union. The faculty consists of dedicated teachers and outstanding practitioners whose accomplishments are evidenced on national and international platforms. Faculty members have published award-winning books, written scholarly articles, exhibited in major museums, built structures, obtained patents, and actively engaged in conferences and professional associations. Their achievements and their commitment to teaching are crucial to the ongoing academic life of the institution.

The Cooper Union has different types of faculty: full-time tenure-track faculty, proportional, adjunct, and visiting faculty. The three Schools and the Faculty of Humanities and Social Sciences each have varying numbers of full, proportional, adjunct and visiting faculty as per their specific curricular needs. The minimum number of full-time faculty across the institution is determined through negotiation between The Cooper Union and the CUFCT. The minimum number of full-time faculty is currently stipulated as 56, “except if economic or academic circumstances require a reduction.” The full-time faculty are expected to teach an average of nine credits per semester (or nine contact hours per week) except for new hires who receive nine contact hours of course release applicable to their first six semesters. In addition, most faculty members spend significant time outside of required office hours, tutoring, advising and overseeing the development of students’ projects. Overall, the faculty understands that to be a good citizen within the academic environment at The Cooper Union necessitates considerable, ongoing work beyond what is required. Those immeasurable contributions of time and support ensure that the learning environment meets Peter Cooper’s dictum “equal to the best.”

For the next several years, the full-time faculty will be in significant transition as many experienced members are expected to retire and new full-time faculty members are expected to be hired. In 2015, the administration made a significant decision to renew the full-time faculty by approving a search for twelve new full-time faculty positions to replace some of the positions lost through years of attrition. After extensive search processes occurring in 2016 and 2017, the School of Art welcomed three new assistant professors, the School of Engineering added four new faculty members, the Faculty of Humanities and Social Sciences was increased by two full-time faculty with a third joining in the fall of 2017 and the School of Architecture increased faculty with two new full-time members joining in fall of 2017 as well. Almost simultaneously, in the spring of 2017, the Senior Administration, in co-operation with the CUFCT,

initiated an Enhanced Severance Buyout program for qualifying full-time faculty. Sixteen eligible faculty members, four faculty members each year for four years (Spring 2017–Spring 2020), will have the opportunity to participate in the Enhanced Severance Buyout. Written into the contract is a plan for replacing these 16 full-time positions.

Proportional faculty members teach two-thirds of a full-time expected load, participate in committee work, and are provided with full benefits. The School of Art appoints proportional-time faculty on a ratio basis of one proportional-time appointment for every three full-time faculty. While the School of Architecture currently has the most proportional faculty, there are currently none in the School of Engineering.

Adjuncts are assigned across the four academic units, with the most being utilized in the School of Art and the School of Engineering. Some adjuncts are long-term colleagues who have been at The Cooper Union for 20 years or more, while others join the faculty for a semester or two. Adjuncts add to the breadth and flexibility of the curriculum; in some cases, by providing specialized courses or unique approaches and skills. While adjuncts are limited to teaching no more than two courses per semester, many teach one course a semester or once a year. Recently, in 2012, the adjuncts formed the Cooper Union Organization of Part-Time Faculty (CUOP) union. The new adjunct contract includes language regarding regular raises, an increased health care fund, and a professional development fund, among other benefits.

The faculty of the School of Architecture consists of three full-time tenured professors (one of whom is the Dean) and two tenure-track full-time professors. There are also eight proportional-time faculty members, one of whom is the associate dean. The full-time and proportional faculty members constitute the “Resident Faculty.” Approximately 33 adjuncts, some young teachers completing advanced study and some senior academics and practitioners of significant achievement complement the “Resident Faculty.”

The School of Art is comprised of nine full-time faculty, six tenured members and three, newly hired, untenured members. One full-time faculty is currently serves as the Dean. There are three proportional faculty and approximately 50 adjunct and visiting faculty members. The full time, proportional and adjunct faculty representatives on three-year contracts comprise the “Resident Faculty.”

Thirty-five full-time faculty members serve the School of Engineering, with one serving as the Dean, and approximately 47 adjunct and visiting faculty members comprise the faculty of the School of Engineering.

Within the HSS faculty, there are nine full-time faculty members, with one serving as the Acting Dean, one proportional faculty member, 27 adjunct and visiting faculty members, and three postdoctoral fellows.

Over the past two years, the hiring of multiple new full-time tenure-track faculty members, many from traditionally underrepresented groups, has enhanced the diversity of the faculty across the institution. The recently implemented Diversity Task Force will be establishing strategies to continue to expand the diversity of the community across the institution. It is imperative for The Cooper Union to be ever vigilant in maintaining ethnic, racial and gender diversity among its faculty, students and staff.

Faculty Development There are many ways by which faculty members receive development opportunities to enhance their academic careers. One such example is sabbatical leave. In accordance with the CUCFT contract, members have the opportunity of taking a full-year sabbatical leave at two-thirds salary once every seven years, or a one semester sabbatical leave at full salary every seven years or a one semester sabbatical leave at two-thirds salary every seven semesters. The Cooper Union also allows full-time faculty the option to apply for unpaid leaves. During the semester, full-time faculty members are often able to suggest preferences for their teaching schedule and are given offices, computers, and appropriate software.

The CUOP has negotiated \$10,000 annually for faculty development funding for adjunct faculty across the institution. Proportional faculty may also take unpaid leaves for professional reasons or paid leave for medical circumstances. In the School of Architecture, proportional faculty members have been granted course releases for special projects.

The Okun Faculty Development Fund has supported the professional activities of the faculty during the 2015-2016, 2016-2017 and 2017-2018 academic years. Full-time, proportional, and adjunct faculty members on three-year contracts have been beneficiaries of this fund. All professional development funds at The Cooper Union may be used for conference fees and travel, attendance at symposia, and exhibitions. While sustaining the quality and effectiveness of the faculty are seen as critical, in practice, disbursement of discretionary funds is at the disposition of each dean and the amount in each budget.

CURRICULUM COMMITTEES

By governance, the Curriculum Committees of the three schools and HSS are responsible for the oversight of the academic programs in their entirety. In light of evolving professional demands and degree requirements, the development and review of the educational offerings continues on an ongoing basis through each of the Curriculum Committees. The committees assess new course proposals, define and redefine prerequisite structures, and, at times, consult with students and faculty across the institution. Any faculty member can propose a new course or make a motion for study by the committee. Minor changes regarding courses and curricula can be voted on and resolved within the committee. Any major changes, after approval by the Curriculum Committee and faculty, are sent to that school's Administrative Committee for approval and then transmitted to the President. With slight variations, the Curriculum Committees of each of the three schools and the Faculty of HSS, are composed of the dean, full-time, proportional and adjunct representatives, with student representation, and often include ex-officio members consisting of an alumni representative, invited deans from other areas, the Dean of Admissions & Registrar, a librarian, and faculty members from other appropriate areas. In the School of Architecture, the associate dean is the chair of the committee. This is important for checks and balances, as the Dean is the chair of the administrative committee and the faculty. Members elected to the Curriculum Committee represent a broad spectrum of the curriculum for critical input in discussions. The Curriculum Committees meet often, as in the School of Art, which meets six to eight times

every semester. The relevance and assessment of the engineering curriculum is also discussed at regular faculty meetings within each degree-granting department. The student councils of each school can also propose curricular modifications. Each class in the School of Architecture also meets regularly with the Dean or Associate Dean at the end of each semester to discuss curricular issues for consideration. Faculty and student representatives from all three schools also serve on the Humanities and Social Sciences Curriculum Committee.

Recent initiatives of the School of Architecture Curriculum Committee have included the introduction of a required course: ARCH 133: Introduction to Urban History and Theories and a new elective course, “Experience in Practice,” that provides for students to earn credit for approved summer work. The School of Art enacted FA 275: Audio Visual I and FA 276 Audio Visual II, a major revamp of the film/video prerequisite and, working with the HSS faculty, enacted changes to Foundation Art History courses. The Art History distribution requirements now include more diverse, global, and non-Western offerings. For example, the HSS Curriculum Committee approved a new seminar: SS 318D: Science and Technology in the Islamic World, and a new topic in HSS4: James Baldwin.

ASSESSMENT OF THE STUDENT LEARNING EXPERIENCE

The four Academic Schools have the primary responsibility for advising students so that progress towards their degrees proceeds in an appropriate manner. The Academic Standards Committees of the three schools counsel students to make certain that established standards are met. With small variations, each Academic Standards Committee is comprised of Full-time, Proportional and Adjunct faculty, a student representative, the Dean of the particular school, the Vice President of Enrollment Services & Dean of Admissions, and the Dean of Students (the Vice President of Enrollment Services & Dean of Admissions and the Dean of Students are non-voting members). At the end of every semester, should students find themselves in academic jeopardy with GPAs below their school’s defined standard, they are summoned to speak about their situations to the committee; whereby the committee may recommend probation, withdrawal or dismissal.

Academic advisement can take different forms in each of the three schools, with a full-time Faculty member, Dean or Associate Dean taking an active role. Advisors help students understand their academic programs, degree requirements, credit distributions, as well as the state of their academic progress. Advisement continues from the first year through graduation. Students must maintain acceptable grade point averages, as defined by each school, as well as make satisfactory progress toward degree completion. The GPA standards vary slightly within each school. (Architecture: 2.0 or better in Architectonics, Design or Thesis, Engineering: 2.0 or better cumulative, Art: 2.5 or better cumulative). The Faculty is dedicated to monitoring and encouraging the performance, commitment and accomplishments of all students.

Each of the three schools has additional means of evaluating students' progress towards their degrees. The Foundation Review in the School of Art occurs once a semester to monitor the progress of each first-year student. The academic performance of each freshman is thoroughly discussed among all of the Foundation faculty members. Through the Freshman Review, the Academic Advisor and the faculty monitor the progress of students in the School of Art, the efficacy of the curriculum and the effectiveness of the conveyance. The School of Art Advisement Office, staffed by the Academic Advisor, a full-time faculty member and an associate, is the center for all academic issues concerning students, faculty, and classes. The Advisement Associate actively communicates with the Registrar's Office and the Academic Advisor in Humanities and Social Sciences to maintain students' files and individual student credit audits. The Advisor meets with every freshman class to explain curricular offerings and requirements and also meets with every transfer student to assess transfer credits. Before every registration period, each student is given a credit audit that outlines their course history with outstanding requirements and discusses their individual academic program. The Academic Standards Committee of the School of Art, joined by the Academic Advisor, conduct a mid-semester review meeting with students in all years who have been identified by faculty as being in academic jeopardy. Students who are summoned are given the opportunity to address their academic performances and discuss problematic issues. The mid-semester meeting is advisory with the hope that after the committee's assistance, students will be able to fulfill their course requirements.

Architecture students meet individually with the academic administrator prior to each registration period. Every summer, each architecture student receives a personal credit evaluation summary that gives an accurate assessment of the student's semester-by-semester progress towards their degree in the School of Architecture, credit distribution, requirements, as well as their grades and grade averages. All incoming transfer students are individually counseled about the curriculum, requirements, and transfer credits granted. Each class of architecture students meets with the Dean and Associate Dean at least once each semester. In additional meetings with student representatives, issues of curriculum, individual courses and teaching, policy, facilities and procedures are all freely discussed at the initiation of either the students or the administration. Student concerns are also brought up in the appropriate committees or directly to the faculty for discussion.

In their first year, engineering students receive information about majors and degree requirements. A common advisor is assigned to entering engineering freshmen, and a program-specific faculty advisor is assigned to engineering students towards the end of their freshman year. As students progress through their fields of study, additional advisors are sometimes assigned. Specialized advisement is available for students with unusual interests, advanced or delayed studies. Each student's progress is monitored by their academic advisor, and if necessary, the School of Engineering Academic Standards Committee. If asked to appear in front of that committee, students are given opportunities to speak about their academic performances and problematic issues.

The HSS advisor, a full-time faculty member provides guidance to students from all three schools on all academic matters that relate to Humanities and Social Sciences. The HSS advisor also evaluates transfer credits, approves HSS courses taken off campus and works with the faculty and staff in the schools concerning student enrollment, scheduling of classes and HSS requirements.

Each senior student in the art program is required to mount a senior exhibition either as a solo show or a collaborative exhibition. It is the most visible assessment of students' performances beyond the fulfillment of credit requirements, grades and class critiques. Criteria for the senior show, questions of professional practice, appropriate faculty evaluation, mentoring and expanded contexts of presentation are ongoing discussions among the faculty. In the School of Architecture, all students complete a year-long thesis project prior to graduation.

GRADUATE PROGRAMS

The School of Architecture Nine to twelve students each year are matriculated in The Master of Architecture II, a one year, three semester (fall, spring, summer) program. Launched in 2009, this graduate program extends the vision and intellectual rigor of the school's undergraduate program. The M.Arch II is open to applicants with a first professional degree in architecture. Graduate students may dedicate themselves to one area or combine two or more of the following concentrations: theory, history and criticism, urban studies, and technology. In the 2016-2017 academic year, 13 students were enrolled.

Students in the graduate program have close contact with faculty and advisors who help them chart their course of study by choosing seminar offerings to support their academic and professional goals. The seminars that are taken during the first two semesters of the program are taught by faculty with diverse pedagogical backgrounds from across the School of Architecture. Select graduate seminars are open to 4th and 5th year undergraduate students with permission.

All students complete a thesis project as part of the graduate program. Thesis development begins in the second semester with ARCH 402: Thesis Research Tutorial, in which students discuss and develop their thesis ideas and present elaborations of their topic at the end of the semester. In developing the thesis, each student works with an assigned faculty member and a second thesis advisor who work individually with the student during the summer thesis semester.

The School of Engineering The Albert Nerken School of Engineering offers both thesis and non-thesis Master of Engineering degrees. A minimum of 30 graduate level credits beyond the baccalaureate degree must be completed at The Cooper Union (in addition to resolving possible undergraduate deficiencies) for both the thesis requiring M.E. Program and the non-thesis M.E. Program. All graduate level credits, including cross-listed upper level undergraduate credits, must be approved by a student's academic advisor(s). A complete program of study is designed by the student with the assistance and approval of the academic advisor(s) and filed in the Office of the Dean of Engineering.

For students enrolled in the thesis-based Master's degree, each student is required to submit a thesis or project in their area of study, equivalent to a maximum of six credits (graduate level), for partial fulfillment of the Master's of Engineering requirements. This project must be discussed with and approved by an advisor prior to being started. The thesis or project must be successfully presented orally by the student and submitted in written form.

Research topics have recently included: process simulation, nanomaterials, signal processing and communications, robotics, biomedical systems, and structural and geotechnical engineering. The graduate program often serves as a test-bed for curricular innovation and promotes building institutional-level collaborations with local industries, hospitals and universities. This also enables faculty to do high-quality research with graduate students, enabling the School of Engineering to attract and retain high quality faculty.

Undergraduates can participate in the integrated Bachelor's/Master's of Engineering program which integrates undergraduate and graduate level work and can be completed as a combined degree in four, five or six years. Approximately 70% of the students enrolled in Master's level courses are Cooper undergraduate students. The Master's programs thus elevate the quality of education the undergraduates receive at The Cooper Union to graduate levels found at other schools. The graduate program allows students to demonstrate success at the graduate level while allowing those in the integrated Bachelor's/Master's program to have the necessary background for more advanced positions in their careers.

UNDERGRADUATE DEGREE PROGRAMS

The Irwin S. Chanin School of Architecture Curriculum All undergraduate students in the School of Architecture follow a single professional, five-year curriculum, which culminates in the Bachelor's of Architecture. The program builds cumulatively over the five years to construct a broad and deep foundation in architecture and urban design. Students in each year move together as a group in Architectonics, then through Design II, Design III, Design IV and Thesis. Studios in the School of Architecture are team-taught, allowing three or four faculty members, both resident and adjunct, to work with students as a group to guide and assess the work of each year's class of thirty students. Consultation and guidance from the faculty individually and as a team occur in personal, over-the-desk conversations as well as informal 'pin-ups', periodically held during the semester giving students the opportunity to have his or her work discussed in the context of the entire class. During the middle of the semester and at the end of the semester, students present their projects in a public setting to their faculty team and invited professionals. Built into the curriculum are opportunities for students' individual pursuits in elective courses in architecture, art, engineering, the social sciences and humanities. A 'minor' in a specific field of humanities or social sciences is available to architecture students in good standing who complete a minimum of fifteen upper-division credits in one of the following areas: American Studies; Art History; Economics and Public Policy; History and Society; Literature; and Science, Technology, and Society.

From the first year, with emphasis on the principles of drawing and representation and the investigation of space, structure and form in Architectonics, students begin to broaden their understanding of architecture as a humanistic discipline while developing their perceptual and haptic skills. Advancing students' knowledge in the second, third and fourth years, students broaden their understanding of the history of architecture, principles of architectural structures, the social and cultural implications of design. In the development of their theses in the fifth year, students identify and research a site, with a comprehensive design which addresses a broader, urgent issue in contemporary society such as ecological conditions, requirements for sustainability or other issues connected with the natural or man-made environment.

School of Art Curriculum The School of Art educates students who are prepared to question and transform society as informed citizens; enlightened thinkers; and skilled, creative practitioners. The School of Art offers a Bachelor's in Fine Arts (BFA) program in the visual arts that is both foundational and broad in scope. The curriculum is structured in a non-restrictive manner to provide students with a concentrated study in individual curricular areas while simultaneously allowing students to engage in many diverse disciplines. The first year Foundation Program provides students instruction in fundamental concepts of design, spatial phenomenon, perception and techniques by studying: Drawing, Two-Dimensional Design, Color, Three-Dimensional Design, Four-Dimensional Design as well as Foundation Art History. After completion of the Foundation Program, students advance to an integrated curriculum in Graphic Design, Painting, Sculpture, Printmaking, Photography, Film/Video, Performance, Drawing and Electives. Students select classes based upon their individual interest, within a structured credit distribution requirement.

The curriculum fosters experimentation within the complex interrelation of visual disciplines. Beginning in the sophomore year, each student receives a studio space to work independently and collaboratively with other students. The studio experience provides for the development of individual creative focus in dialogue with experimentation and collective debate.

A two-year, Certificate in Art may be offered to matriculated students within the School of Art, on a very limited case-by-case basis, with approval of the Academic Standards Committee, as an alternative to the BFA degree. The program consists of 60 credits in Foundation Studio courses, Advanced Studio electives, and Art History courses.

Albert Nerken School of Engineering Curriculum The School of Engineering offers a Bachelor of Engineering degree in chemical, civil, mechanical, and electrical engineering. These degree programs are all accredited by the Engineering Accreditation Commission of ABET. For those students who wish to pursue a more self-designed, integrated program, the school offers a non-accredited general engineering program degree (B.S.E.) Students who elect to pursue the B.S.E. degree program are able to create their own curricula within a set parameter in the areas of engineering that cross traditional boundaries: computer science, entrepreneurship, biomedical, energy, sustainability, infrastructure, environmental, mechatronics, robotics, and more. The undergraduate program also offers non-degree programs in chemistry, physics and mathematics. Undergraduate juniors and seniors are permitted to register for graduate level courses when appropriate. The integrated Master's program offers advanced students the option of earning both a bachelor's and a master's degree in one of the engineering disciplines within four, five, or six years.

Strong math, sciences and computer skills are developed in all engineering students especially during the freshman and sophomore years. In the sophomore year, each student begins to move from foundational course work to an in-depth grounding in one discipline. The cultivation of engineering design is interwoven through the entire curriculum. Students begin to understand that design is not just a technical solution but contains components addressing local and global issues such as sustainability, economics, societal impact, safety and renewal. The emphasis on project-based learning and integration of knowledge permeate all programs in the School of Engineering. To augment their studies, diverse electives are offered to students in business, finance, and an array of courses in one of the other engineering disciplines. The study of engineering at The Cooper Union is challenging and rigorous. An extraordinary number of Cooper Union engineering graduates earn Ph.D. degrees at some of the most prestigious graduate schools around the world.

THE HUMANITIES AND SOCIAL SCIENCES

In support of the three degree granting schools, the Faculty of Humanities and Social Sciences (HSS), a non-degree-granting unit of the college, provides a foundational and connective education through the twelve-credit, four-semester required core curriculum and an array of elective courses. The core classes of HSS1 through HSS3, taken by all art, architecture and engineering students, provide a deeper understanding of the historical and contemporary world while developing students' communication skills in writing and speaking. The analyses of various literary forms, the study of the political, social and intellectual developments from modern Europe provides a framework for more focused study in HSS4. Each HSS4 class involves a lengthy research paper and centers on a significant figure or topic from the modern period whose relevance has significant bearing in contemporary culture. The core curriculum is a prerequisite to all elective courses. After completing the four semester core course sequence, students are able to choose from a range of elective HSS courses addressing world issues such as: Contemporary Latin American Art, The Environmental History of the United States, World Religions, Caribbean Literature, The Personal Essay, Macroeconomics, Global Cities, Gender Studies, Islamic Art and Architecture, as well as seminars in contemporary issues.

Students commonly take HSS classes in fields unfamiliar to them, as well as courses that complement their specific disciplines. The two new full-time faculty appointments made in 2016 in Modern Art History and in Philosophy, as well as a third full-time member arriving in fall 2017 will anchor and extend elective opportunities for all students at The Cooper Union. The HSS curriculum is designed so that young architects, artists, and engineers become stronger in their professional fields by developing interpretative, oral, and written skills developed through the HSS curriculum.

COMMUNICATION, INTELLECTUAL AND TECHNOLOGICAL SKILLS

The Cooper Union strives to educate the whole student by instilling in each, the capacity for life-long learning. The development of the whole student involves the acquisition of some skills that are practical and measurable yet others, more intangible, that evolve over time. In classes and critiques, students test their voices; all are expected to be actively engaged participants. Within this small institution, students of all three schools often work beyond the classroom in close proximity in studios, labs and facilities; shared sites of production where, outside of class time, students interact freely and informally with each other, in conversation, inquiry and critique. The studios, labs and facilities are active environments; fertile ground in sharing ideas, asking questions and making connections with new, surprising work. This culture of home space is vital to the cultivation of communication and intellectual skills.

A myriad of more formal ways to enhance the students' communication and intellectual skills are structured within the academic programs and course offerings of the institution. The four core HSS courses (HSS1-HSS4) taken in the freshman and sophomore years and composed of students of all three schools, are structured to increase each student's ability to communicate in written and oral form. In these classes, students gain greater confidence in conducting research, analyzing texts and arguing points of view. Elective HSS courses, taken after the completion of HSS1-HSS4, expand intellectual frameworks, and build upon oral and written skills acquired in the first two years. Informed citizenship requires that a student possesses the tools necessary for critical thinking, the ability to interpret written and oral material, a sense of history, and an engagement with the range of problems and challenges within contemporary society.

The Center for Writing works with students on a one-to-one basis, helping with any aspect of reading, writing, or speaking in need of improvement. The Center's main goal is to provide opportunities for students to improve their conceptual and concrete tools in written and spoken communication of all types.

Beyond assignments and coursework in HSS, in classes of each of the three schools, students are called upon to write responses to articles, compose artists' statements, apply for prizes and fellowships, write analyses of research. In the School of Engineering, students frequently give oral presentations based on experimental labwork. The culture of critique in the Schools of Art and Architecture necessitates that students be able to speak insightfully and clearly about their own work and the work of their fellow students. All students further their abilities as they make more public presentations in the form of senior exhibitions, more public presentations to guest professionals invited to The Cooper Union and especially the most visible yearly presentation of the pedagogy, the annual End of the Year Exhibition. Students from all three schools work with the faculty to install this massive undertaking, capstone to the end of each academic year.

All students in the School of Architecture and the School of Art take a year-long required techniques course which involves training in both traditional and digital tools. Beyond the freshman year, the three schools may embed appropriate technology within a given course, such as Photography, Video or Silkscreen taken by School of Art sophomores and upper classmen or classes in advanced methods of digital representation and fabrication in the School of Architecture. The School of Engineering also provides workshops in more advanced classes to enable the development of appropriate skills.

In the School of Engineering, students in their first and second years substantially acquire both traditional and cutting-edge technological skills. The Department of Mechanical Engineering has incorporated instruction in hands-on technology and computer skills earlier in the academic program and in more systematic ways. For example, a new statics course with a hands-on laboratory component was recently introduced. The Department of Civil Engineering is offering more computation-based instruction in the first two years including projects using the software packages Revit, Rhino, Sap 2000, Robot and more. Students in the Department of Chemical Engineering are introduced to technological programs, modern process simulation tools, and advanced software packages early in the curriculum.

INSTITUTES AND CENTERS

CONNECT (Cooper's Own No Nonsense Engineering Communication Training) Established in 1997, CONNECT is a required four-semester program of intensive training in communication skills for freshman and sophomore engineering students. Through extensive workshops, this program fosters academic, vocal, gestural, situational, and physical communication skills necessary for students wishing to become successful, professional engineers.

Center for Innovation and Applied Technology The Center for Innovation and Applied Technology (CIAT) provides a supportive, flexible research and learning laboratory for collaboration within The Cooper Union community, as well as with mentors from alumni, industry professionals and other educational institutions. Research in the lab is based upon real world challenges.

SEA2M3 The Center for Sustainable Engineering, Architecture and Art—Materials, Manufacturing and Minimalism (SEA2M3) looks to develop sustainable solutions to complex problems facing humankind, especially in poorer, more rural areas. Reciprocal learning and an emphasis on real-world problems in diverse cultures point the way for creative solutions. Students from all three schools work on a range of projects that address energy, water and shelter in remote, rural regions of the world. SEA2M3 has strong links with universities and communities in Ghana, Rwanda, Kenya and Burundi. A team of Cooper Union faculty and students regularly travel to African communities to work on issues related to water and lighting.

S*PROCOM2 The Center for Signal Processing, Communications and Computer Engineering Research enables Bachelor and Master of Engineering students to channel their interest in Computer Engineering and Signal Processing within full-scale research project.

Institute for Urban Infrastructure The Institute for Urban Infrastructure specializes on New York City and its infrastructure with particular attention, significant importance, value, and weight given to renewal, rehabilitation expansion and protection of the city's systems, mechanics and networks.

Center for Urban Security The Center for Urban Security operates under the aegis of the Civil Engineering Department. Its main focus is the safety and enhancement of New York City's infrastructure.

Maurice Kanbar Center for Biomedical Engineering The Maurice Kanbar Center for Biomedical Engineering provides laboratory facilities for faculty and students involved in bioengineering projects. Research in biomedical devices, tissue engineering, obstructive sleep apnea biomechanics is conducted in the Cooper facility and also in conjunction with New York-based hospitals.

INDIVIDUALLY-DRIVEN LEARNING EXPERIENCES

All students have a significant number of opportunities for individual and collaborative learning beyond the classroom. Structured within the degree requirements, the designation of "free electives," required credits in the three schools, ensures that students extend their studies into areas outside of their chosen disciplines. "Free electives" can be fulfilled by taking courses in architecture, humanities and social sciences, visual art, engineering, science, language, or mathematics. In addition, within the School of Art, student may choose to take pre-approved "free elective" courses off-campus at other institutions.

For students who wish to pursue projects beyond the classroom, independent study is available to students in good standing. Within the School of Engineering, students may pursue independent study projects or research with faculty in chemical, civil, electrical, or mechanical engineering, as well as chemistry, math, and physics. In the School of Architecture and the School of Engineering, paid work-study research projects with faculty are also available. Students in the School of Art, may pursue individual and extended projects through independent study. Faculty who work with students on independent study projects, spend a significant time meeting with students on a regular basis outside of office hours and class time.

Students, mostly from the School of Art and at times from the School of Architecture, can participate in a paid internship program which allows them to engage with design firms, studios, museums, not-for-profits, publishers and other sites in the New York metropolitan area for real world experience. In the School of Architecture, certain internships may be eligible for credit. The paid internship program has been invaluable in extending possibilities outside of the classroom, in exploring potential career paths, and in gaining confidence in navigating real world situations.

The Cooper Union also offers several unique opportunities for individually-driven learning experiences. The Martin Rothenberg Travel Fellowship in the School of Art and the Palmer Hayden Travel Fellowships for African American Students are available for art and architecture students who wish to pursue an independent project, which requires travel. Students in the School of Architecture who are in their final year of study may apply for a William Cooper Mack Thesis Fellowship to support independent travel and research to inform their Thesis project. Fellowships such as the School of Art's Rhoda Lubalin Fellowship in Graphic Design and the Maxwell Lincer Fellowship For Excellence in the Engineering Field help support and recognize deserving students in specific fields of study.

The highly competitive Benjamin Menschel Fellowship Program for Creative Inquiry provides students with the opportunity to research, travel, and produce an in-depth project, which is then presented in exhibition form to the community. Students from all three schools submit proposals and presentations to a faculty committee representing all four faculties. Four to six projects are funded each year. Research, travel and, if required, production is carried out over the summer, and the resultant work culminates in an exhibition during the fall semester. In the spring of 2017, the Menschel Fellowship Committee received 24 separate proposals from 38 students. Ultimately, five projects were funded. The winning projects included: an exploration of traditional "African compound living" in Northern Ghana, an investigation of the "Great Dismal Swamp" of North Carolina, documentation of historically important prisons in the USA, the study of early opera stage design in Sienna, Italy, and a study of intertidal infrastructure of the Baja coast from California through Mexico.

Each year, the Oxbow Summer Residency in Saugatuck, Michigan and the Skowhegan Summer Residency in Maine, offer summer residencies to one School of Art student. The residency provides significant time, space, and resources for young artists to produce new work within a community of creative practitioners.

Graduates and faculty members of The Cooper Union have been honored with a significant number of Fulbright Fellowships and Awards. From 2009 through 2017, seventeen Cooper Union post-grads and faculty members have received Fulbright Fellowships to all parts of the world, including: Austria, Belgium, British Columbia, El Salvador, Estonia, France, India, Italy, Kazakhstan, Kyrgyzstan, Latvia, Panama, Peru, Spain, Sweden, Vietnam, and the Jordan River.

EXCHANGE PROGRAMS, ARTICULATION WITH OTHER SCHOOLS AND COOPER UNION IN AFRICA

Both the School of Engineering and the School of Art have foreign exchange programs. As the practices of engineering and art have become increasingly global, The Cooper Union remains committed to the value of foreign study.

The School of Engineering Summer Abroad Program is a 6-8 week opportunity to pursue a research project with a faculty member at a partner university. Students may earn up to six credits for their summer work. When they return to The Cooper Union, students must submit a technical report that thoroughly documents the educational inquiry pursued. Students are also required to provide a report of their experiences in the host city. The following institutions, among others, partner with The Cooper Union for this summer initiative:

- Universidad De Burgos, Burgos, Spain
- Universidad Pontificia Comillas, Madrid, Spain
- Hamburg University of Applied Sciences, Hamburg, Germany
- Technische Universität, Dresden, Germany
- Karlsruhe University of Applied Science, Karlsruhe, Germany

The School of Engineering also offers one or two semesters of foreign study (scholarship, research, investigation, inquiry, learn, pursue) to students in good standing who wish to expand their studies and cultural experiences at select universities abroad. Current partner institutions are:

- Indian Institute of Technology Bombay, Mumbai, India
- University of Iceland, Reykjavik, Iceland
- Universidad de Burgos, Burgos, Spain
- Universidad Pontificia Comillas, Madrid, Spain
- Technische Universität Dresden, Dresden, Germany
- Hamburg University of Applied Sciences, Hamburg Germany

The School of Art recognizes and supports the importance of study abroad for cultural and educational purposes. Students who participate benefit educationally and culturally from study in a foreign country. As a member of AICAD (The Association of Independent Colleges of Art and Design), the School of Art participates in a Mobility Program with numerous art schools and program throughout the United States and Canada. In addition, the School of Art has a Foreign Exchange Program with select schools in various countries. The School of Art Curriculum Committee evaluates and adds schools in new locations as needed.

The School of Art partner schools are:

- Gerrit Rietveld Academie, Amsterdam, The Netherlands
- Universitat de Barcelona, Barcelona, Spain
- Hochschule fur Gestaltung und Kunst, Basel, Switzerland
- Berlin University of the Arts, Berlin, Germany
- Staatl Hochschule fur Bildende Kunste, Frankfurt, Germany
- Bezalel Academy of Arts & Design, Jerusalem, Israel
- Kyoto Seika University, Kyoto, Japan
- Slade School of Fine Art, London, England
- Central Saint Martins College of Art & Design, London, England
- Malmo Art Academy, Lund University, Malmo, Sweden
- Ecole Nationale Superieure des Beaux Arts, Paris, France
- Academy of Fine Arts, Prague, The Czech Republic

The Cooper Union in Africa Cooper Union students see themselves as global citizens and strive to further Peter Cooper’s legacy, particularly by improving the lives of the less fortunate through discovery and innovation. The Center for Sustainable Engineering, Art and Architecture—Materials, Manufacturing and Minimalism (SEA2M3), a program established by the School of Engineering, supported with grants from the National Science Foundation, the Environmental Protection Agency among other foundations, companies and private donors, offers students the summer opportunity to work on sustainable solutions to problems in the less industrialized world. Students, along with faculty have spent summers in Ghana, Rwanda, Kenya, and Burundi developing projects that address energy, water, and shelter issues. Among other innovations, students have developed a portable, emergency shelter for Somali and North Kenyan refugees using local materials and invented the “Socialite”—a low-cost, highly durable lantern made of plastic containers, a low-cost battery and foldable, rooftop solar panel that can be shared between community members in Ghana.

NON-DEGREE PROGRAMS

The Irwin S. Chanin School of Architecture In 2013, the School of Architecture initiated two four-week intensive summer courses, one for college students, and the other an advanced digital professional development course. “Introduction to Architecture For College Students: Foundation Studies and Portfolio Development” provides a concentrated study of the culture, practice and history of architecture. Taught by faculty from the School of Architecture, this immersive, studio-centered course emphasizes foundational design, analysis, freehand drawing, and model making. Students receive transcripts for credits earned.

In 2014, the School of Architecture offered only the four-week intensive summer course for college students. Since 2015, the School of Architecture has offered the four-week intensive summer course for college students as well as a four-week intensive summer course for high school students. Introduction to Architecture, the four-week summer program for high school juniors and seniors as well as recent high school grads, combines morning workshops, seminars and visits to some of New York City’s most important architectural spaces with afternoon studio work. Students explore key principles of architectural design through weekly lectures, drawing, model-making, digital analysis and fabrication.

School of Art The Typographics Festival is an 11-day series of events organized by the School of Art in cooperation with the Department of Continuing Education. The festival builds on the long and significant history of typographic design at The Cooper Union. Working designers, design historians, curators, rare books librarians, educators and students from around the world participate in workshops, symposia, tours and social events. The events are organized by the curators, past and current, of The Herb Lubalin Study Center, the Dean of the School of Art and the Director of Typography Programs. A well attended two-day conference draws hundreds of attendees to The Great Hall for presentations by designers. A four-day TypeLab allows for mini-workshops, technical presentations, discussions of legal and ethical issues within the type and design industries, as well as fun interactive and educational events. During the TypeLab, one-on-one critiques with top professionals allow students and young designers to get feedback. Workshops are taught by the Type@Cooper instructors. Workshop topics include hand-lettering, typeface design, typography, web typography, Python scripting, and sign painting. Tours are organized to visit prominent design studios, and curator’s tours of exhibitions and important collections of design ephemera and books as well as walking tours with type historians.

The Pre-College Summer Art Intensive is a four-week tuition-based program for high school students preparing to attend competitive undergraduate art programs. In-depth instruction along with experimental workshops in: contemporary art issues, cell and stop animation, creative writing, digital photography, drawing and graphic design, are supplemented with field trips to New York City museums, galleries and artists’ studios. The program culminates in a student exhibition and well-designed annual publication. As part of the Summer Art Intensive, three-to-four residencies are offered to artists for one month to develop a new project within art and design. These practicing artists contribute to the Summer Intensive through talks and encounters with the pre-college students.

Albert Nerken School of Engineering The Summer STEM Program, a six-week, tuition-based, concentrated program provides high school sophomores and juniors who are interested in STEM fields, direct experience in design and creative problem solving. Projects span an array of disciplines including: robotics, digital fabrication, biomedical and genetic engineering, urban infrastructure renewal, among others. Throughout the program, faculty and teaching assistants guide students to undertake real-life issues.

Continuing Education The Department of Continuing Education provides non-credit bearing courses to the general public for a modest cost and the Cooper Union community free of charge. Open enrollment is available for classes in digital fabrication, fine arts, architectural history, and typography and typeface design. Two Type@Cooper certificate programs in typeface design, one is part time, one year program and one is a five week full time intensive program offer qualified students, chosen through an application process a rigorous and comprehensive professional training. In fall and spring, workshops organized by Type@Cooper are also available to the general public when space allows. The Type@Cooper programs draw students from around the country and internationally.

TUITION-FREE HIGH SCHOOL PROGRAMS

School of Art Started by Cooper Union undergraduate art students in 1968, the Saturday Program (a program of both the School of Art and School of Architecture) enrolls over 200 high school students each year, drawn from New York City's public high schools. Six free studio art courses are offered each semester in drawing, painting, graphic design, sculpture, architecture and portfolio preparation. Supplies are provided to enable public school students to explore various media and techniques. The program combines students with motivation but no prior art experience along with more advanced acolytes. Classes are often taught by Cooper Union students, providing them with the opportunity to gain skills in the classroom. Field trips to museum, galleries and artists' studios are provided at no cost to each enrolled student. Over 10,000 public school students have participated since 1968.

Since its creation in 1992, the School of Art Outreach Program has offered free classes and free materials in the fall, winter and spring to high school students, grades 10-12, who wish to study art and/or seek to enter art schools and college art programs after high school. Taught by professional artists with Cooper Union undergraduate teaching assistants, all students take drawing classes along with other classes in printmaking, photography, 3D and 2D design. The program also offers a class on contemporary art issues with guest speakers and visits to museums and artists' studios.

Albert Nerken School of Engineering Through the STEM Days Program and the STEM Saturday Program, the School of Engineering has been providing outreach opportunities to New York area high school students for almost 40 years. The program has expanded to include students from Grades 5 through 12 who visit The Cooper Union for one-day, immersive experiences in STEM-focused design and research. Cooper Union undergraduates teach these educational components under the guidance of faculty and staff.

ACADEMIC SUPPORT

Staff The academic programs are supported by a dedicated, technical staff, who maintain the classrooms, shops, labs and studios, as well as provide additional support for faculty and students. Students and faculty members frequently rely upon staff members for help with projects. Staff members are assigned to specific areas to assist in the installation of weekly exhibitions; maintain the academic computer labs; oversee multiple, specialized film, video, photography, printmaking and sculpture facilities; maintain the architecture archives; support the chemistry labs, and sustain the civil, electrical, mechanical, and biomedical engineering facilities. At least one staff member is on duty during the hours that each facility is open. Health and safety are main priorities as the staff maintain equipment, provide instruction in the proper use of tools, hardware and software and oversee the facilities.

The staff union does not currently provide for professional development. However, staff members are able to take one course in Continuing Education at no fee, as available. They are also welcome to use the facilities and the Center for Writing provided that they do not displace any students. Staying up-to-date with new methods and ever-changing technology, especially in this digital age, requires on-going learning. It is imperative that members of the staff stay current in order to assist the faculty and best serve the students. Therefore, the Deans support small, ad hoc, in-house training whenever possible.

The Library The library provides ongoing, significant support for all academic programs. The library meets the needs of students pursuing their professional education in Art, Architecture and Engineering and provides support for courses in the Humanities and Social Sciences. Located on the ground floor of the Foundation Building, it houses over 100,000 volumes of books and periodicals. Its specialized collections include historical materials, films and videos, as well as e-journals and e-books. Through consortial arrangements with New York University, the New School University and several other private academic institutions, Cooper Union faculty and students have access to the resources and reciprocal borrowing privileges from these libraries.

Four full-time librarians and the Library Director provide individual research help as well as group instruction in methods of information literacy. During their first year, all students receive an introductory library instruction session. An additional session occurs during the fourth semester of the HSS core curriculum. The librarians meet with other classes to offer advices and expertise in research methods when requested by the faculty, including, in recent years, EE senior projects (ECE395) and Nanotechnology (Ch451). Librarians also maintain communication with the academic schools by serving as ex officio members of curriculum committees.

The reference desk is staffed with a professional librarian during all operating hours seven days a week. In addition to serving the faculty, staff and students of The Cooper Union, patrons from the consortium libraries also use the Library regularly. Alumni utilize the services and collections of the library on an on-going basis. The addition of a “Friends of the Library” Program has allowed the Library to provide access to neighbors and visiting researchers and to offer borrowing privileges to alumni for a nominal fee.

Architecture Archive The mission of the Architecture Archive is to record the history of the School of Architecture’s pedagogy through the documentation of student work, to provide resources to the students in order to augment and enhance their architectural education, and to produce informative exhibitions and publications on the subject of architecture and related disciplines. Each summer, the Archive documents a faculty-designated selection of models and drawings from the annual End-of-Year Exhibition, which is comprised of student work produced in all five undergraduate design studios, as well as the graduate research design studios. The photographic recording of these materials is subsequently used for publications, the presentation of work to the National Architectural Accrediting Board (NAAB), and to augment the student work collection, which is the largest of the Archive’s holdings.

The Center for Writing and Language Arts In any given week, approximately 15% of The Cooper Union’s student body meets with a staff member in the Center for Writing and Language Arts for individual consultations. The staff also provides small group workshops covering various topics. Many students visit for an hour a week for their entire time at The Cooper Union. Staff in the Center may tailor individualized questions and activities for individual students that encourage students to expand the horizons of their knowledge.

Professional Development for Students The Center for Career Development, which provided career counseling and professional development primarily for art and architecture students, and the Office of Engineering Career Development and Outreach, which served only engineering students, has recently been combined into the Center for Career Development, which will now serve all students across the institution without compartmentalization. This newly formed office and staff structure will allow for better support of all students. Students will continue to receive individualized professional development support including information about internships, job opportunities, workshops, résumé and cover letter writing, interviewing strategies, professional networking, fellowships, research programs, awards and graduate study information. Students have benefitted enormously from the paid internship program, which supports individual student learning outside of the academic setting, in museums, individual artists’ studios, hospitals, city agencies, design and architecture firms, and not-for profit organizations. Alumni of all three schools often serve as mentors and employers.

Extensive on-line resources are available for current students and alumni on the Center’s website which includes an online job and internship board, access to GoinGlobal (an international career resource) as well as other pertinent information about students’ and graduates’ professional pursuits and accomplishments.

Publications The Design Center, established in the late 1970s, now part of the Office of Communications, produces most internal Cooper Union publications including catalogs, posters, cards, forms, invitations, annual reports, signs, newsletters and brochures. The Creative Director accepts outside projects, as well as pro-bono projects from non-profit organizations that are developed by junior and senior design students. This pro-bono work performed by students in the Professional Practice class provides invaluable experience in dealing with clients, budgets, and deadlines, as well as providing community service.

The Office of Communications provides clear, well-designed material for prospective students, applicants, students, faculty, administration, graduates, and alumni, plus external audiences. The Office of Communications also manages the college's social media presence through its official website and other forms of electronic communication as well as working with public media. The school catalog is currently available only online as a cost-cutting measure. The catalog contains all the pertinent information about the academic programs and policies.

The Cooper Union website and the weekly E-Newsletters track and publish the academic, creative and professional activities of the faculty, staff and students. The website and newsletters help promote the achievements of the Cooper community. "At Cooper" and other newsletters are sent to approximately 10,000 subscribers.

CHAPTER IV: SUPPORT OF THE STUDENT LEARNING EXPERIENCE

INTRODUCTION

The Cooper Union seeks to admit highly motivated and talented students who demonstrate, through their achievements and academic records, that they have the abilities and potential to successfully engage and excel in the programs offered at The Cooper Union. The Cooper Union has been committed to providing equitable opportunity to students with merit and potential regardless of financial means since its founding. Although its financial model has undergone changes, The Cooper Union has nonetheless maintained its commitment to academic quality, reputation, and historic enrollment levels.

In this section of the Self-Study Report, a critical review of the institution's academic and non-academic offices and services that guide and support the student learning experience was performed in order to confirm that The Cooper Union meets compliance with the following standard regarding the support student learning experience, as defined by the Middle States Commission on Higher Education (MSCHE):

“Across all educational experiences, settings, levels, and instructional modalities, the institution recruits and admits students whose interests, abilities, experiences, and goals are congruent with its mission and educational offerings. The institution commits to student retention, persistence, completion, and success through a coherent and effective support system sustained by qualified professionals, which enhances the quality of the learning environment, contributes to the educational experience, and fosters student success.”

THE OFFICE OF ADMISSIONS

The Office of Admissions is currently developing a mission statement and yearly goals. Historically, one goal has been to provide access and resources for all qualified applicants to apply. In 2015, The Cooper Union became a member of the Common Application, which provides exposure to a wider range of prospective students than in prior years. An important feature of The Cooper Union's participation in the Common Application is the ability to grant and accept application fee-waivers provided by organizations such as NACAC, College Board, and the ACT, as well as those provided by high schools and/or The Cooper Union. The Office of Admissions collaborates with each school to develop recruitment and enrollment plans, and track student progress.

Admissions Policies and Procedures The Cooper Union's admission process is need blind, and admits students solely on the basis of merit and potential. How merit is assessed is determined by each school of The Cooper Union and is addressed in this section. Multiple measures of merit are utilized within each school in an effort to holistically assess potential and mitigate socio-economic factors that underlie some key metrics.

Each of the three degree granting schools, the School of Art, the Irwin Chanin School of Architecture, and the Albert Nerken School of Engineering, have unique standards for admissions and methods of evaluating applications. These standards are established to capture information regarding the core skills and presumed competencies for success in the first year of study.

General Admission Requirements All undergraduate applicants are required to submit their application utilizing the Common Application by the established deadlines: Early Decision (on or around December 1) or Regular Decision (on or around January 8). The Cooper Union initiated participation in the Common Application in 2015 in an effort to maintain consistent levels of quality applications. Although the Early Decision option has been offered to the School of Art and School of Engineering applicants in the past, the School of Architecture will begin to offer Early Decision as an option for students applying for Fall 2018. In addition to the Common Application, all undergraduate applicants are required to submit the following: high school transcript, college transcripts (if applicable), standardized test scores (SAT and/or ACT accepted (non-traditional and/or transfer students may apply for a waiver), and letter(s) of recommendation (**figures 4.1–4.4**). Non-native English speaking applicants who have had less than three years of academic instruction in English must also submit an official copy of their TOEFL score report.

Figure 4.1

ACADEMIC PROFILE | OVERALL

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean First Term GPA
COHORT 2012	185	91.8	683	646	652	2899	3.26
COHORT 2013	186	91.5	691	652	666	2924	3.25
COHORT 2014	214	92	700	646	652	2918	3.20
COHORT 2015	230	92	697	652	652	2921	3.19
COHORT 2016	219	93.2	691	650	644	2917	3.22

Figure 4.2

ACADEMIC PROFILE THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean First Term GPA
COHORT 2012	19	90.3	650	617	619	2789	2.78
COHORT 2013	19	93.6	654	610	642	2842	3.10
COHORT 2014	24	89.0	639	611	606	2745	3.13
COHORT 2015	26	87.9	634	608	595	2715	2.60
COHORT 2016	24	92.0	660	605	587	2771	3.03

Figure 4.3

ACADEMIC PROFILE | SCHOOL OF ART

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean First Term GPA
COHORT 2012	62	86.4	571	605	582	2622	3.29
COHORT 2013	64	86.0	554	602	597	2614	3.38
COHORT 2014	51	87.3	561	589	581	2604	3.28
COHORT 2015	61	88.9	552	605	578	2625	3.25
COHORT 2016	61	89.3	553	610	582	2638	3.33

Figure 4.4

ACADEMIC PROFILE | ALBERT NERKEN SCHOOL OF ENGINEERING

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean First Term GPA
COHORT 2012	104	95.2	754	676	698	3080	3.33
COHORT 2013	103	94.4	772	687	706	3109	3.18
COHORT 2014	139	94.1	757	671	687	3057	3.19
COHORT 2015	143	94.1	771	680	694	3086	3.27
COHORT 2016	134	95.2	765	678	687	3082	3.20

1 - Academic Index= 10*(HSGPA) + SATM + SATCR + SATW

Each school of The Cooper Union has additional, unique admissions requirements. In addition to evaluating academic preparation, the Schools of Architecture and Art assess viewpoint, skills and talent, potential for successful engagement and contribution, and ideas. The faculty evaluates this merit through creative assessments and written prompts provided through the administration of a Studio Test and a Hometest, respectively.

- Applicants to the School of Architecture must submit responses to the Studio Test; transfer applicants are also required to submit a portfolio. The School of Architecture reviews applicants through a faculty-based admissions committee, operating under a school-specific governance.
- Applicants to the School of Art are required to submit one art-based faculty evaluation, a portfolio of original work, a sketchbook and a completed Hometest. The School of Art also operates under a school-specific governance and has a faculty-based admissions review process.
- Applicants to the School of Engineering are required to submit SAT Subject Tests in mathematics (I or II) and science (chemistry or physics), along with responses to a writing supplement.

Transfer Credit Policies The admissions committees of each school, and sometimes, departments, also review transfer applications, conduct transcript review to assess articulation of courses, and determine the student's level of entry and study at The Cooper Union. The review of transcripts and course syllabi verify that course work is comparable in content and depth to that of equivalent courses offered at The Cooper Union—an effort to support a transition in which students have every opportunity to succeed. Transfer students are notified of their placement(s) in their acceptance letters.

- In the School of Architecture, transfer applicants are admitted and placed into a specific year of the design sequence and curriculum based on review of their college record, Studio Test, and portfolio. Incoming students who have completed college-level academic work at other institutions are asked to present course syllabi and other requested documentation to secure approval and credit as determined by the dean or designated faculty/staff member.
- In the School of Art, the admissions committee and chair determine if a student will be admitted as a transfer, first-year with advanced standing, or first-year based on the transcript review, Hometest and portfolio. The student is provided information regarding their specific credit evaluation directly from their advisor in the School of Art.

- The School of Engineering has accepted a limited number of transfer students in recent years, largely due to program size and space restrictions. As a result, engineering transfer students are admitted later in the cycle (post May 1st). After a transfer student has accepted the offer of admission, individual department chairs review the college transcript and award transfer credits accordingly. The Office of Admissions provides students with their credit evaluation. The School of Engineering may grant credit for high school work in Advanced Placement (AP) courses in mathematics. Students who receive a 4 or 5 on the AP Calculus BC exam are asked to take a placement exam administered by the Department of Mathematics during orientation in order to assess that they have achieved mastery in core content. If they pass, they are awarded credit.

Governance, School-wide Admissions Processes, and Policies The admissions policies of each school are reviewed annually between each school’s admissions committees and their faculty, and the Dean of Admissions, with respect to the policies approved by the Board of Trustees.

Each school and admissions committee of The Cooper Union operates within the processes established by their respective governances. Governance processes establish the structure, faculty involvement, and review process for admitting students. The overall governances and policies have remained consistent over the past 20 years despite the recent change to the tuition scholarship model. When the new tuition scholarship policy was introduced there were discussions regarding the admissions policies and school-specific governances. The current committee structures are as follows:

- The School of Architecture Admissions Committee consists of two Resident Faculty, one Adjunct Faculty, one student representative, the Dean of the School of Architecture, the President, the Dean of Admissions and one alumnus from the School of Architecture. The Dean of Architecture, the President, the Dean of Admissions and representative of the Alumni Association are ex-officio and do not have a vote.
- The School of Art Admissions Committee as defined by governance consists of three to four Full Time Faculty members, one proportional time Faculty member, one elected Adjunct representative and a student all of whom have a vote. The Dean of the School of Art, the Dean of Admissions, and a representative elected from the Alumni Association are ex-officio members of the committee. A regular full-time faculty member is elected by the committee as the chairperson for a one-year term.
- The Engineering Admissions Committee consists of five members of the Faculty: one representative from each of the four degree-granting departments of the School of Engineering, selected by the full-time faculty of those departments, and one representative total from the remaining three departments of the School of Engineering, elected by the full-time members of those three departments. In addition, there are two non-voting members of the Committee: the Dean of Admissions and Records and one student, elected by the Engineering School Student Council to serve for one year.

Determining, Maintaining, and Increasing Application Quality and Diversity The Cooper Union seeks to attract high caliber/high potential students in terms of both quantifiable measures (grades and test scores) and intangible qualities. Qualitative attributes of an applicant are assessed through writings and examples of creative work, as in the Hometest for art applicants, and Studio Test for architecture applicants, and writing samples, as well as conversations through the open house and portfolio review process. The Cooper Union's admissions officers target geographically and socio-economically diverse high schools, as well as off-campus portfolio and college fairs. Recruiters meet with students in person and often present to student groups to provide information about The Cooper Union, its academic offerings, and financial aid opportunities. Because each school has different cultures and educational priorities, recruiters from other schools often give different advice to applicants. This individual attention is very meaningful and useful to high school students who are looking for a college where they will thrive and be successful.

The School of Art Admissions committee sends faculty and alumni recruiters across the country to meet prospective students, offer portfolio critiques, and offer advice to students regarding their artistic aspirations and interests. Five open houses per year also provide tours of the facilities and portfolio reviews to all who attend. Dozens of faculty members and alumni participate in these events. 85% of all students admitted to the School of Art have met with a faculty or alumni representative at an Open House or Portfolio day.

The Office of Admissions maintains relationships with various community-based organizations across the United States with a focus on the New York City metro area and New York State. The Office of Admissions hosts groups for on-campus visit programs and tours, collaborates with diversity Cooper Union student groups (e.g., Society of Women Engineers, Chinese Student Association, Hillel, National Society of Black Engineers) as well as Cooper Union's Saturday, Outreach and STEM Programs. Understanding the important role that student role models and mentors play, the Office of Admission engages with these organizations to encourage connection and engagement, and strengthen awareness of the opportunities in arts and engineering programs. The admissions office also contributes to diversity-focused publications such as the Carnegie Communications Multicultural and Science and Engineering magazines.

The Impact of Tuition on the Admission Pool Institutional selectivity is reflected by the admission rate (a low admission rate indicates a large applicant pool and low offers) and academic profile (the GPA and SAT) of the admitted class. The Cooper Union monitors these measures and remains a highly selective school. The School of Architecture and Art rankings are often reputational in nature, with less emphasis placed on these quantitative academic measures. The Cooper Union has maintained a relatively low admission rate and enrolled students with high academic profiles, although in the wake of the new tuition model, its ability to keep its admission rate low has been challenging. These admission measures contribute to The Cooper Union's ranking as a highly selective institution.

In order to understand the impact of the new tuition model, particularly on The Cooper Union's selectivity, it was crucial to review enrollment trends pre- (2009–13) and post (2014–17) tuition change. Comparisons of admission metrics pre- and post- the tuition policy change, are provided in the following sections.

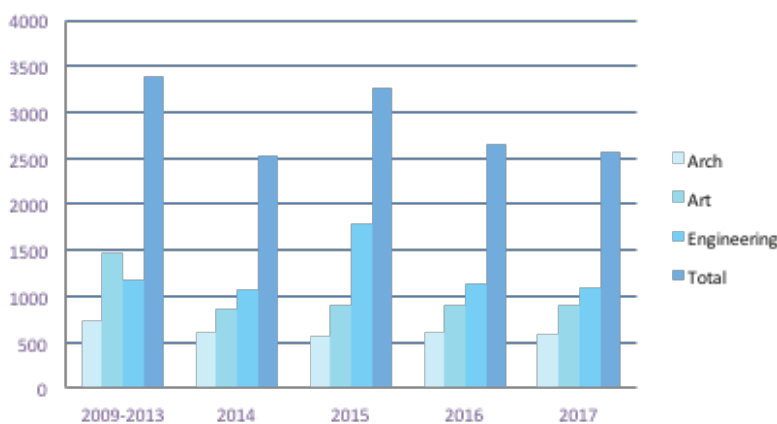
Application The Cooper Union's application process is such that only the most committed students apply, particularly in the schools of art and architecture, which require portfolio submissions and the creation of original work to respond specifically to Cooper Union's application prompts. All three schools require applicants to submit supplemental material to be considered for admission. This process helps identify high quality and motivated students.

Compared to 2009–13 on average:

- 2014–17 architecture and art studio/home test submissions dropped from mid-50% to low 40%
- 2014–17 engineering supplemental questionnaire submissions rose from mid-60% to mid-80%
- The application rate declined 18.5% from an average of 3,383 to 2,756 (**figure 4.5**)
- Art applications declined 39.3%
- Architecture applications declined 19.0%
- Although engineering applications increased 7.3%, much of this may be attributed to a spike in engineering applications specifically in 2015. As indicated in engineering student supplemental questionnaires, this reflected interest in a proposed Computer Science program.

Figure 4.5

FIRST YEAR APPLICATION PRE- AND POST- CHANGE TO TUITION POLICY



The Admission Process The Cooper Union selects candidates for admission based upon their demonstrated skills, competencies and aptitudes to identify students who will thrive in their program of study and through their engagement, contribute to the educational mission of the institution.

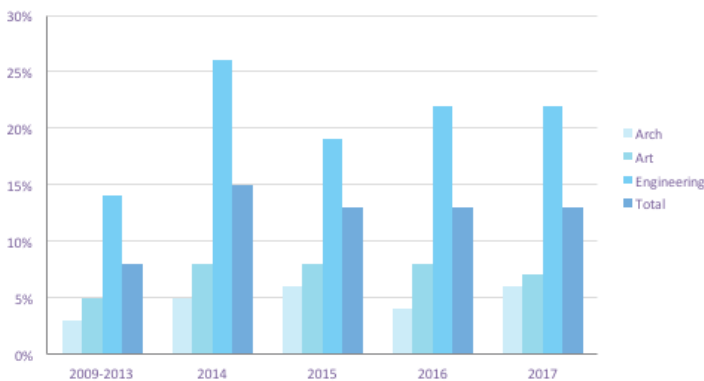
- When selecting candidates for admission the architecture and art schools place great emphasis on portfolio and home/studio test work, with less emphasis on the traditional academic metrics. Despite this, the GPA and SAT scores of these students remained consistent as in previous years.
- Admission to the engineering school is heavily based upon GPA, SAT or ACT, and SAT Subject Test scores. While secondary to the academic profile, engineering applicants must also demonstrate fit through supplemental questionnaire responses and reference letters. Data that follows will demonstrate that, along these measures, the quality of the enrolled engineering class remains consistent as in years past.

The admission rate increased from 8.0% to 13.5%. Admission offers were intentionally increased in anticipation of an impact on The Cooper Union’s ability to yield. It was thought that the enrollment yield would be impacted by the ability to compete financially with offers made by competitive schools.

- Architecture admission offers (rate) rose, on average, from 3% in 2009–13 to 5% in 2014–17
- Art admission offers (rate) rose, on average, from 5% in 2009–13 to 8% in 2014–17
- Engineering admission offers (rate) rose, on average, from 14% in 2009–13 to 22% in 2014–17

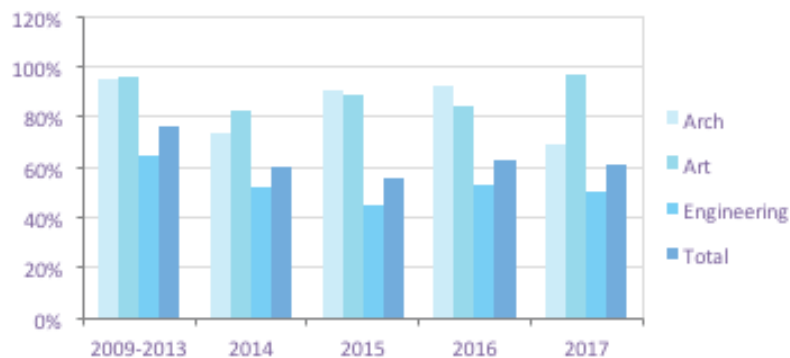
Figure 4.6

FIRST TIME COLLEGE SELECTIVITY (% ADMITTED)
PRE-AND POST- CHANGE TO TUITION POLICY



Yield The Cooper Union’s impression is that yield outcomes have been tied to the quality of the financial aid package. Many of the students admitted to The Cooper Union receive competitive financial aid offers from other institutions. Many of The Cooper Union’s peer institutions are experimenting with various financial aid strategies; for instance, need based full tuition awards to cover educational expenses for those with low and middle incomes. The shift from full-tuition to partial-tuition scholarships likely impacted The Cooper Union’s ability to compete with well-endowed, highly selective institutions (e.g. Cornell, Yale, Carnegie Mellon, etc.), particularly among low- and moderate-income students.

Figure 4.7
YIELD PERCENTAGE: PRE- AND POST- CHANGE TO TUITION POLICY



The yield (# of enrolled students/ # of admitted students) on admission offers dropped from an average of 76% for the period prior to the change in tuition policy, 2009–2013; to an average of 61% for the period subsequent (post) to the change in tuition policy 2014–2017 (figure 4.7). Increases in the number of admitted students and decreases in the number of enrolled students that accompanied the change to 50% awards contributed to the observed drop in average yield for each school prior and subsequent to the change in tuition policy. However, recent trends may look different and vary by school.

- The average yield in architecture dropped from 95% to 82%
- The average yield in art dropped from 95% to 88%
- The average yield in engineering dropped from 66% to 50%

Changes in the tuition policy and enrollment targets at The Cooper Union contributed to shifts in the admission rate and yield. As a small institution, the effect of any adjustments has greater impact due to small number effects.

Selectivity One of the most crucial measures for The Cooper Union, one that is deeply embedded in its culture and legacy, is the commitment to student quality—the institution’s selectivity with regard to traditional high school achievement measures such as GPA and SAT, as well as the school based assessments to identify other strengths. Regardless of shifts in application, admission and yield, The Cooper Union has continued to enroll students who meet its long-standing measures of merit. The academic profile of admitted students has remained high, consistent with its highly selective peer institutions.

The high school achievement profiles (figure 4.8) of the freshman classes since 2014 are comparable to those in 2009–13. Despite changes in pool size and financial aid packages, The Cooper Union was able to assemble a class that is highly competitive:

Figure 4.8

HIGH SCHOOL ACHIEVEMENT PROFILES

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean First Term GPA
COHORT 2012	185	91.8	683	646	652	2899	3.26
COHORT 2013	186	91.5	691	652	666	2924	3.25
COHORT 2014	214	92	700	646	652	2918	3.20
COHORT 2015	230	92	697	652	652	2921	3.19
COHORT 2016	219	93.2	691	650	644	2917	3.22

1 - Academic Index = 10*(HSGPA) + SATM + SATCR + SATW

SAT Math, Critical Reading, and Subject Test scores have remained steady despite shifts in the financial aid policy. The Cooper Union remains a highly selective university (figure 4.9).

Figure 4.9

COMPARISON OF SUBJECT TEST SCORES OF INCOMING ENGINEERING STUDENTS PRE- AND POST- TUITION POLICY CHANGE

Year	Subject Test		2011–13	2014	2015	2016	2017
College	SAT	Score	Percent of Admits w/ Score	Percent of Admits w/ Score	Percent of Admits w/ Score	Percent of Admits w/ Score	Percent of Admits w/ Score
Engineering	Physics	700–800	88%	76%	89%	89%	89%
		600–690	12%	12%	11%	11%	
		500–590		1%			
	Chemistry	700–800	95%	87%	92%	97%	95%
		600–690	5%	13%	7%	3%	5%
		500–590			1%		

The entering engineering classes of 2014, 2015, 2016, and 2017 demonstrate comparable subject test outcomes, although a slight decrease in the physics and chemistry scores of students entering in 2014.

The chart below (figure 4.10) offers evidence that the SAT scores of enrolled students are in the same range of competitiveness (Percentile of Nationally Representative Sample) now as they were pre-tuition:

Figure 4.10

ACADEMIC PROFILE PRE- AND POST- TUITION POLICY CHANGE IN 2014 FOR ALL COLLEGES

Year	2009 – 2013		2014		2015		2016		2017	
	CR Reading	MSAT	CR Reading	MSAT	CR Reading	MSAT	CR Reading	MSAT	EBRW	MSAT
25th–75th percentile	608–716	616–776	600–730	650–770	610–720	630–800	600–720	640–780	650–740	660–790
Median SAT	662	696	665	710	695	760	660	710	680	740
Median Total SAT Score	1358		1375		1455		1370		1410	

Median SAT scores have been converted into a Median total SAT score to explore whether there were shifts in Cooper’s admitted student standing among a Nationally Representative Sample:

Converted Total Score	Nationally Representative Sample Percentile	SAT User Percentile-- NATIONAL
1480	99	98
1470	99	98
1460	99	97
1450	99	97
1440	98	96
1430	98	96
1420	98	95
1410	97	95
1400	97	94
1390	97	94
1380	96	93
1370	96	92
1360	95	91

College Board, Understanding Scores, 2016

Percentile ranks represent the percentage of students who score equal to or below the score the student obtained. As an example, we are using 2016 and 2017 data.

National Percentiles are derived via a research study by the College Board. Nationally representative sample percentiles are weighted to reflect all US students in the 11th or 12th grade regardless of whether they take the SAT.

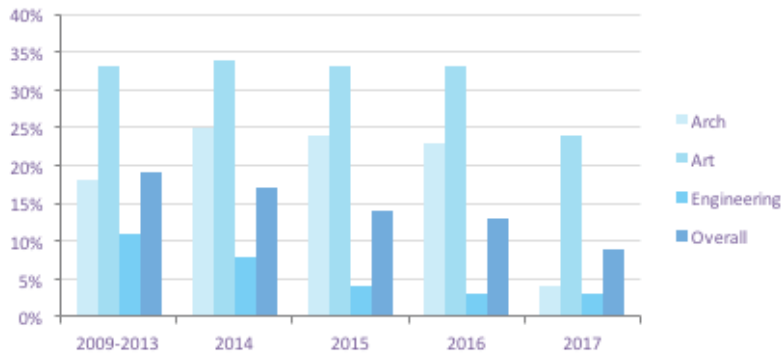
SAT User Percentiles are weighted to represent all students in the 11th or 12th grade who typically take the SAT.

SAT User profiles suggest that Cooper SAT profiles were on average, in the top 9% in 2009–13; the top 4% in 2014 and 2016; the top 3% in 2017 and the top 1% in 2015.

Diversity Diversity of thought, experiences, and perspectives has the potential to enrich the educational experience for all students at The Cooper Union. Recruiting and enrolling diverse students is important to our ability to fulfill The Cooper Union’s mission. However The Cooper Union will need to compete strategically for talented under-represented minority students (URM) who meet the rigorous admission standards of the institution. Many of The Cooper Union’s peer and aspirational peer institutions are competing for the same students, particularly in engineering. Shifts in financial aid models at well endowed institutions and now, in New York State (the Excelsior Program), have created a more competitive enrollment environment, meaning that The Cooper Union is now competing with schools offering equal or more generous financial aid packages. The Cooper Union has observed troubling shifts in the enrollment of diverse students.

Figure 4.11

PERCENTAGE OF FIRST TIME CLASS IDENTIFYING AS HISTORICALLY UNDERREPRESENTED MINORITY (URM) STUDENTS PRE- AND POST- CHANGE TO TUITION POLICY



This chart (figure 4.11) depicts a decrease in the enrollment of URM in engineering from the period 2009–13 to 2014–17.

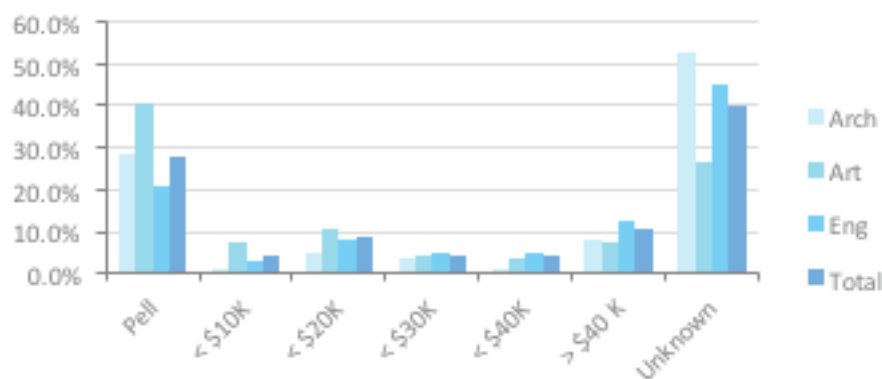
- Between 2009 and 2013 URM engineering students on average comprised 11% of the incoming student population.
- In 2014, URM engineering student enrollment fell to 8%; in 2015 it fell to 4% and in 2016 and 2017 it fell to 3%.
- There is some thought among the admissions staff that URM enrollment declines may be associated, in part with the phenomenon of students who do not indicate race or indicate multi-race as a category.
- There have been gains in the enrollment of URM students in Art and Architecture, although in 2017 the School of Architecture also experienced a decline in the enrollment of diverse students. From 2014–16 diverse students had comprised nearly one-fourth of the School of Architecture entering class; in 2017 their enrollment in the School of Architecture fell to 4% of the entering class.

The portfolio and more holistic admission processes hold promise in supporting greater enrollment of high-achieving, high-potential URM students. These practices need to be explored to more fully appreciate the success competencies being evaluated, and the impact of the informal connections with faculty and peers that occur in the process. The Cooper Union’s recently formed Diversity Task Force has been charged to re-examine policies and practices that affect the diversity on campus. The Board of Trustees has affirmed its support for this effort.

Assessment of Socio-Economic Diversity The commitment to socio-economic diversity is apparent throughout Cooper Union’s history. As a school founded for the working class, The Cooper Union is particularly aware of the institution’s role in changing the trajectory of a student’s opportunities and in this way, opportunity for social impact. Socio-economic diversity is also an important factor in creating a dynamic learning environment where a variety perspectives are brought to bear on the topics and challenges of our time.

Figure 4.12

FALL 2014 TO FALL 2017 ENROLLED STUDENTS BY EFC AND SCHOOL



Currently, 32% of students receive Pell grants or have an Expected Family Contribution (EFC) below \$10,000, and 51% have EFC’s above \$40,000 or the EFC is unknown because the student has not completed a FAFSA. The Cooper Union serves students on both ends of the socioeconomic range and relatively few in the middle class (figure 4.12). As an outcome of the new tuition model, the institution may be losing low moderate, and middle-income students to competitive peers offering need based full tuition awards to students at income levels of up to \$120,000 (generally, but not always, outside of eligibility for full awards).

- The Schools of Architecture and Art have higher percentages of Pell students (41% and 28%, respectively) partially due to the more holistic admission process administered through home and studio tests and in the case of art, the portfolio review, mitigating overreliance on standardized tests and thus, high school based educational inequities.
- 58% of Engineering students have EFC’s above \$40,000 or did not report EFC’s. It is assumed that students not reporting EFC’s (“Unknowns”) have EFC’s in excess of \$40,000 although a few exceptions might exist in the case of DACA students. This finding is not unexpected but in light of The Cooper Union’s commitment, warrants exploration. The School of Engineering admission review processes are more heavily weighted towards standardized tests; performance on which has been demonstrated to be correlated with family income (K-12 resources and opportunities).

The Cooper Union's ability to enroll highly talented students has been unaffected. To support greater diversity though, there will be need to be approaches that leverage tradition and informal networks, develop new networks and relationships to build greater understanding of The Cooper Union mission, and integrate approaches that assess multiple measures of achievement. The Office of Admissions has increased on- and off-campus recruitment, a comprehensive communication strategy, and developed partnership strategies to strengthen Cooper's pipeline of qualified prospective students. To gauge effectiveness, The Cooper Union will continuously monitor its achievements relative to enrollment goals and metrics.

Communication with Prospective, Admitted, and Enrolled Students The Office of Admissions coordinates the majority of outreach and communication on behalf of each school via a comprehensive communication plan. The communication plan is developed to target the following sub-populations: prospective students segmented by school of interest and/or level of engagement, admitted students, enrolling students, parents and college counselors. The communication plan is evaluated, revised and reviewed annually based on analytic indicators including open and click-through rates, level of engagement, direct and indirect feedback from the various constituencies including student focus groups, feedback forms and formal surveys. Also, the Office of Admissions views the communication flow as an organic process that is constantly adapting to the needs of the admissions cycle. Therefore, it is continuously adjusting its communications and methods to reflect new information and needs. The predominate methods for communication are: printed publications, emails, text messages, web pages, video content, social media, on-campus visits, and off-campus recruitment

Secure Management of Student Information The method by which student information is secured and managed depends on the classification of the student, which can be defined as a prospective student, an applicant, or an enrolled student.

Prospective Student Data Until recently, The Cooper Union's Office of Admissions contracted Ruffalo Noel Levitz, an enrollment and financial management company, to execute prospective student communications. All prospective student data utilized by Ruffalo Noel Levitz was limited to imperative information only; for example, omitting sensitive information like social security numbers, and transmitted via secure servers. Recently, the Office of Admissions discontinued using Ruffalo Noel Levitz and has brought all associated work in-house.

Applicant Data The Cooper Union uses a university level customer relations management (CRM) system (Recruit by Ellucian) to maintain and track prospective and applicant records. Applicant data and information is stored in Recruit (a cloud-based product) and migrated to Colleague, the institution's on-campus enterprise data system. The Cooper Union reads applications for admission in a physical paper format. If a student is not admitted, the Office of Admissions maintains his or her admission application for one year. These files are stored in locked file cabinets in the admissions office. After one year, all information is shredded. If a student is admitted and enrolls, the application information is kept on file by the Registrar's office.

Enrolled Student Data Enrolled student data is maintained in Colleague and is secured and accessed in a variety of ways. Students and faculty access data associated with them (for example, a student views their grades, a professor views their rosters) through self-service tools (Self-Service and WebAdvisor by Ellucian).

Administrators primarily use the Colleague UI (administrative user-interface). These accounts are strictly secured to what an individual has been given permission to see. Permissions are agreed-to by the departmental leaders who “own” a portion of the data (for example, the registrar approves who may view or update registration data, the HR director approves who may view or update HR records). Permissions are updated at the request and review of department heads and audited annually. Data security in Recruit and Colleague are maintained through complex password requirements, secure (SSL) websites, strict firewall rules, and routine backups.

Collaboration with Faculty, Staff and Administration In addition to the coordinated efforts put forth by the Office of Admissions and the application review process, each individual school assists and supports recruitment towards their enrollment.

- The School of Architecture administration, faculty, and students participate in two on-campus events, attend selected college fairs which are specific to architecture and design and communicate with prospective and admitted students as needed throughout the admissions cycle. New for the 2017/2018 recruitment cycle, architecture faculty will be participating in selected National Portfolio Review Days with the School of Art.
- The School of Art Admissions Committee, with the support of the full-time School of Art Coordinator of Recruitment and Admissions, oversees the organization of comprehensive recruitment plan which includes 26 high school visits, four college fairs, seven regional events and attends approximately 35 National Portfolio Day Review Events. In addition, every fall, the School of Art hosts five on-campus open houses where students can receive a portfolio review from a faculty member or an alumni, take a student led tour of the facilities and participate in a Q&A with the Deans and representative of the admissions committee. The School of Art maintains a database of students reviewed at School of Art recruitment events and conducts outreach/follow-up accordingly.
- The School of Engineering administration, faculty, and students participate in on-campus recruitment events, offer class shadowing opportunities, and answer student inquiries pertaining to research and curricula. They also attend college fairs and various off-campus recruitment events with admissions staff.

In addition to the support and participation provided directly by the schools of architecture, art and engineering, the Office of Admissions regularly collaborates with the Office of Student Affairs and the Office of Alumni Affairs and Communications. These interactions include, but are not limited to: on and off-campus events, development of admissions communications (print and electronic), media relations and brand awareness, advertising, disseminating new student information, providing career preparation and outcome information, and creating a seamless transition experience from prospective to admitted to matriculated student.

Assessing Prospective Students Experience Through the Enrollment Process A prospective student's experience with The Cooper Union community throughout the enrollment process is assessed through feedback forms and formal surveys such as the Admitted Student Questionnaire, Non-Applicant survey and On-campus Event Feedback Forms. Information is constantly used within the Office of Admissions and when appropriate, shared internally to adjust, adapt and inform the recruitment and communication strategies.

Identifying, Placing and Supporting Under-prepared Students Through a selective admissions process, The Cooper Union accepts a highly qualified student body. The admissions process for each of the three schools is quite different and is tailored for the particular requirements of the schools. The Schools of Art and Architecture require students to do a specially designed test (which changes slightly each year) to qualify for entrance as well as demonstrate academic achievement through traditional grades and test scores. For those applying to the School of Engineering, high grades and SAT/ACT and SAT subject test scores are imperative.

Since it is expected that students are only admitted if they meet competency standards for their respective areas of study, there currently exist few formal procedures for special placement for remedial education. One exception is in the School of Architecture. Students accepted to the School of Architecture who have not successfully completed pre-calculus in high school are required to take pre-calculus during the summer and submit an official transcript documenting successful completion of the course before enrollment.

Although the Faculty of Humanities and Social Sciences provide a significant element of a student's general education at The Cooper Union, it does not participate in the admissions process for any of the three schools. However, in consultation with the Center for Writing, The Cooper Union reinstated a writing diagnostic assessment at orientation during the week before school begins. This assessment is graded by professional writing and composition teachers. Students who are found to need help with writing are encouraged to make use of the Writing Center through participation in on-going appointments with writing associates.

The Center for Writing is an academic support unit available to all members of the Cooper community, reporting to the Dean of Humanities and Social Sciences. The Center's mission is to provide educational opportunities for students to acquire the conceptual and concrete tools they need to produce, participate in, investigate, critique and synthesize written and spoken communication of all types. The Center for Writing employs 18 writing associates and offers over 150 session hours per week. They maintain flexibility that allows them to prioritize high-need students through the semester and to be immediately responsive to faculty requests for student accommodation.

Instructors of the first freshman humanities course, HSS1, are alerted by email if any of their students scored poorly on the diagnostic test, so they may arrange for co-curricular support. Scores are not shared with faculty, only the names of students who may be in need of support. In HSS1, all papers are given one-on-one feedback. In May 2018, for the first time, there will be an exit diagnostic to compare with the one given in summer 2017. For students beginning school in the fall of 2018, a new practice is being implemented. Admitted students (incoming freshman) will be sent a shared reading assignment over the summer. This reading assignment will be used during the writing diagnostic and HSS1 “Introduction to Literacy” study, which includes composition.

At the start of each semester, The Dean of Students alerts the schools and faculty members of the need to accommodate students with learning disabilities. Space is often needed to accommodate students who are entitled to extra time accommodations for testing. Identifying additional space is sometimes difficult due to the limited number of classrooms in the 41 Cooper Square.

Other options exist for students who need additional support throughout the academic year. For example, students who may be struggling with math or chemistry course work, may seek help from a tutor, which is often an upper-classmen paid for by the respective department.

FINANCIAL AID

There have been significant and fundamental changes in the financial aid options available to undergraduates at The Cooper Union. Since its inception, the institution has historically been tuition-free for all enrolled students regardless of their socio-economic status. Due to years of declining of financial resources, on April 23, 2013, the trustees of The Cooper Union announced the tuition scholarship changes to the campus in an official statement:

“... the Board of Trustees voted last week to reduce the full-tuition scholarship to 50% for all undergraduates admitted to The Cooper Union beginning with the class entering in the fall of 2014.

“Under the new policy, The Cooper Union will continue to adhere to the vision of Peter Cooper, who founded the institution specifically to provide a quality education to those who might otherwise not be able to afford it. Consequently, we will provide additional scholarship funding for those with need, including full-tuition scholarships to all Pell Grant-eligible students. We intend to keep admissions need-blind.”

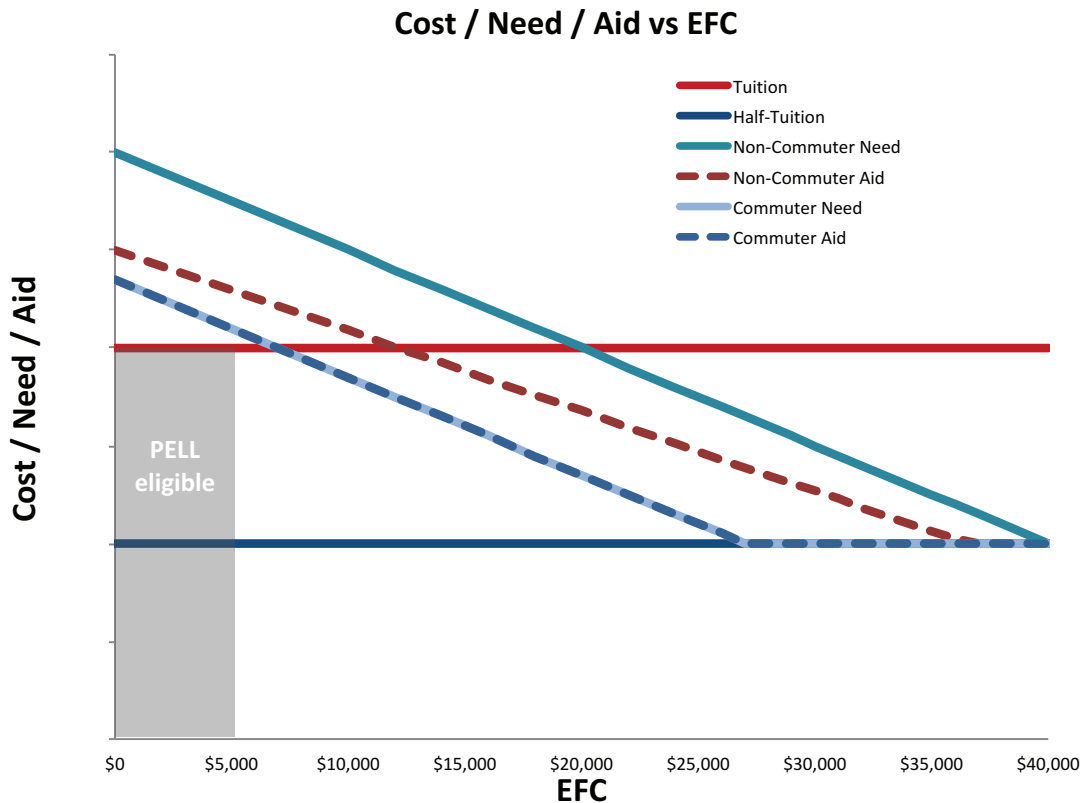
This statement provided the foundation of the new financial aid model: a minimum 50% tuition scholarship to all newly enrolled undergraduates, as well as additional funds for those students with demonstrated need. The additional scholarships would be a sliding scale and any PELL eligible student would qualify for a full-tuition scholarship.

The expected family contribution (EFC) is utilized for a need-based driven financial aid award packaging formula. This formula ramps from 50% for those with large expected family contributions up to a full-tuition scholarship plus additional grant aid for those with an expected family contribution of zero (figure 4.13).

The current financial aid options available to students are institutional merit scholarships, need-based grants, endowed scholarships, state and federal grants, direct loans and work-study. The half-tuition merit scholarship is awarded to all undergraduate students upon admission. The Admission Office awards additional institutional Innovator Merit Scholarships. Students are required to complete a FAFSA form in order to be considered for additional need based financial aid. Expected family contribution not only determines their federal aid but additional need based institutional grants as well.

Figure 4.13

FINANCIAL AID MODEL



There are some need-based and merit-based restricted scholarships that can be awarded to students regardless of need or expected family contribution (EFC) that are established requirements for federal financial aid. Some of these awards are managed through the schools (Art, Architecture, and Engineering). There are certain requirements to qualify, such as: school, academic standing, major, residence, and financial need. Many of these scholarships are used to substitute for tuition assistance and institutional grants. Students benefit both financially as well as from the name recognition and the honor of being a named-scholarship recipient.

Assessment of Financial Aid Model Scholarships and Financial Aid are the means by which college becomes affordable and accessible. Although there is much press about the increasing published cost of a college education, students and families also pay equal attention to net price. Net price is defined as the published cost of attending a college or university less any financial aid awarded.

- net price offers a measure of affordability for students and their families
- affordability has been a barrier to enrollment especially at highly selective, private institutions like Cooper
- the tuition discount offered by private institutions is increasing competition

An assessment of net cost was conducted to review how the financial model put in place in 2014 was meeting the objective to support need and affordability. This was formative, assembling a deeper dive into the financial support afforded lower income students and factors at play in the observed net cost (**figure 4.14**).

Figure 4.14

NET PRICE 2014-2015 BASED ON ACTUAL AWARDS

Income Range	Cost of Attendance A	Avg. Institutional B	Avg. Total Financial Aid C	Avg. State & Federal Aid D=C-B	Avg. Net Cost A-C
\$0-\$30,000	\$56,297	\$43,732	\$51,725	\$7,993	\$4,572
\$30,001-\$48,000	56,297	47,921	52,674	4,753	3,623
\$48,001-\$75,000	56,297	47,616	49,423	1,807	6,874
\$75,000-\$110,000	56,297	40,568	42,520	1,952	13,777
\$110,000+	56,297	27,414	27,414	0	28,883

Financial packaging has been guided by cost of attendance and financial aid policies. In this analysis, one unexpected finding is that students in the lowest income range have a higher net price than their peers with incomes in the range \$30,001–\$75,000. While EFC's may vary between these two groups, the budget might underlie some of the findings:

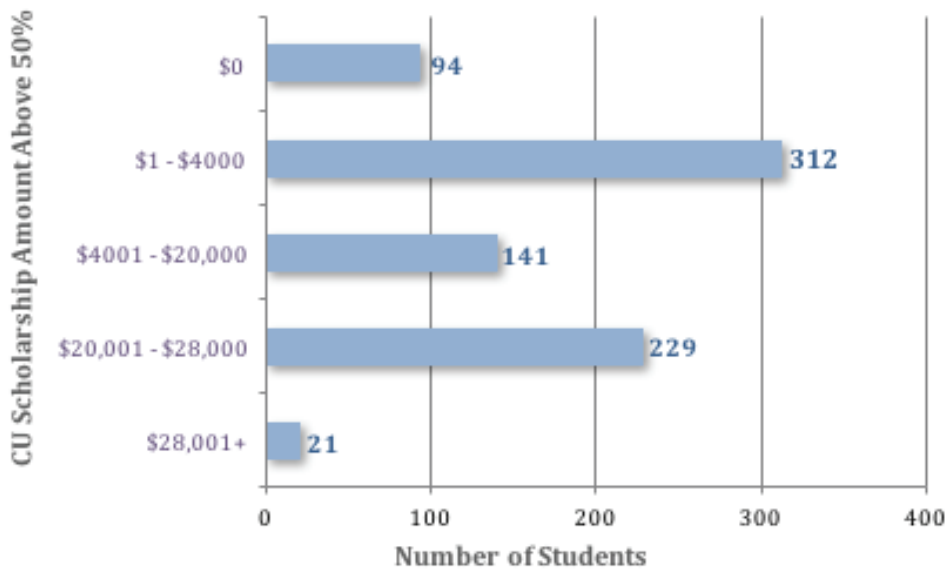
- there are fewer students in the \$0–\$30,000 (lowest income) range as opposed to the \$30,001–\$48,000 range
- lowest income students are largely commuter students. Students in the \$30,001–\$48,000 income range include more residential students and thus receive more Cooper grant/scholarship aid to offset a higher COA
- EFC differentiates the availability of state and federal aid within income ranges up to \$75,000–\$110,000

Findings raise concern as to the ability of low-income students to fully engage in the educational experience at The Cooper Union if they are commuting. There is additional concern that their full engagement may also be impacted by a need to work while in school, in order to offset educational expenses. A student survey is being planned to explore the quality of student engagement as it relates to residential status, need to work, and family commitments. The Higher Education Research Institute (HERI) CIRP survey is under review.

Nonetheless, on average, students are receiving 76% of tuition in scholarships. Approximately 37% of students are still receiving full-tuition scholarships, and less than 10% are receiving only the minimum 50% scholarship (figure 4.15).

Figure 4.15

STUDENTS RECEIVING GREATER THAN HALF-TUITION SCHOLARSHIPS (2014–17)



Although limited in its ability to award 100% full tuition awards, the new financial aid model has afforded The Cooper Union the opportunity to support its students in such a way that they have the ability to be successful and engage in course and institutional offerings reasonably unfettered by financial concerns.

Communications Financial aid and affordability is formally discussed at prospective student on-campus events and off-campus recruitment by either an admissions or financial aid representative. Before, during, and after Admitted Students Day, individual financial aid appointments are available for students and their families to meet one-on-one with a financial aid representative to discuss their package. Admitted students/families are always welcome to call and speak to a counselor over the phone or make an appointment. Financial aid representatives support students and families by assisting them with the FAFSA filing process and helping them to better understand the form through phone calls, in person consulting and via emails. Students and families are provided with detailed financial aid package information and a copy of the New York State and Federal shopping sheet that shows future years' estimated "cost of attendance" through an online student self-service portal. The office is open for student walk-ins, as well as appointments for financial aid counseling.

The financial aid office is currently undertaking improvements to its scholarship awarding process. Currently there is no application process for awards. The selection of recipients is primarily based on expected family contribution and GPA. A future scholarship process is envisioned that will be more systematic. Rather than being distributed based on choices made solely by a school protocol, the scholarship opportunities will be open to students to apply and recipients' selection will be more transparent.

RETENTION

Retention is an institutional measure that reflects the percentage of students in a cohort who graduate in four to six years (The Cooper Union's Architecture program is a 5-year program of study thus the 5-year rate is considered on time). However, retention rate can be misleading as a marker of excellence unless viewed in context of the institution's selectivity. Highly selective schools like The Cooper Union are among the most competitive and selective institutions, with low acceptance rates, often in single digits. These types of institutions, including The Cooper Union, are enrolling the most competitive students emerging from high school. Degree attainment rates are among the highest of any institutional classification. This is evidenced by the variance in graduation rates within a university selectivity category hence benchmarking is an important exercise.

The Cooper Union is currently benchmarking its selectivity measures, first year persistence, and graduation rates, against those of its peers to evaluate its effectiveness against those in The Cooper Union’s peer group (figure 4.16–4.22).

Figure 4.16

SELECTIVITY MEASURES

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean First Term GPA
COHORT 2012	185	91.8	683	646	652	2899	3.26
COHORT 2013	186	91.5	691	652	666	2924	3.25
COHORT 2014	214	92	700	646	652	2918	3.20
COHORT 2015	230	92	697	652	652	2921	3.19
COHORT 2016	219	93.2	691	650	644	2917	3.22

1 - Academic Index= 10*(HSGPA) + SATM + SATCR + SATW

Retention rates (figures 4.16–4.20) are linked to institutional selectivity suggesting that institutional outcomes are differentiated by “inputs”—the students being admitted. Analysis of first-year outcomes is crucial to understand The Cooper Union’s impact and opportunity for quality improvements. Using analytic findings, The Cooper Union will shape data-informed strategies and goals with faculty and staff.

The Cooper Union is using new approaches to data, largely driven by the concerns that have emerged from the shift in tuition model. Much of the discussion regarding the tuition model change has focused on the impact to selectivity and yield; The Cooper Union has enjoyed the benefit of educating students who are inclined to be successful and by all indicators will continue to do so. However, particularly in light of a review of graduation and persistence data provided below, a new conversation is being shaped regarding retention and effectiveness. Although admitted students are high achievers and tightly clustered by achievement thresholds within their programs of study, it will be important to assess the attitudes regarding what it takes to be successful in college, and tolerances for frustration and failure among students who see themselves among the “elite.”

RETENTION BY YEAR, TERM, AND COHORT

Figure 4.17 | Overall

	Original Count from Admissions	Year 1		Year 2		Year 3		Year 4		Year 5		Graduated	Enrolled in Last Spring Term but not Graduated	Persistence	First-Year Attrition	Second-Year Attrition
		Fall ²	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring					
Cohort 2012	185	100%	97.3%	93.5%	90.8%	87.0%	89.2%	83.2%	87.0%	14.6%	12.4%	85.4%	2.2%	87.6%	6.5%	13.0%
Cohort 2013 ³	187	100%	98.4%	94.1%	93.5%	89.8%	88.7%	83.3%	88.2%			69.4%	19.9%	89.2%	5.9%	10.2%
Cohort 2014 ³	218	100%	97.7%	91.6%	88.8%	79.0%	76.2%						76.2%	76.2%	8.4%	21.0%
Cohort 2015	232	100%	96.5%	91.3%	89.1%								89.1%	89.1%	8.7%	
Cohort 2016	220	100%	98.6%										98.6%	98.6%		

Figure 4.18 | The Irwin S. Chanin School of Architecture

	Original Count from Admissions	Year 1		Year 2		Year 3		Year 4		Year 5		Graduated	Enrolled in Last Spring Term but not Graduated	Persistence	First-Year Attrition	Second-Year Attrition
		Fall ²	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring					
Cohort 2012	19	100%	78.9%	78.9%	73.7%	78.9%	73.7%	73.7%	78.9%	63.2%	73.7%	63.2%	10.5%	73.7%	21.1%	21.1%
Cohort 2013 ³	19	100%	100%	94.7%	95%	94.7%	94.7%	89.5%	89.5%				89.5%	89.5%	5.3%	5.3%
Cohort 2014 ³	24	100%	87.5%	87.5%	79.2%	58.3%	62.5%						62.5%	62.5%	12.5%	41.7%
Cohort 2015	27	100%	84.6%	80.8%	73.1%								73.1%	73.1%	19.2%	
Cohort 2016	24	100%	95.8%										95.8%	95.8%		

Figure 4.19 | School of Art

	Original Count from Admissions	Year 1		Year 2		Year 3		Year 4		Year 5		Graduated	Enrolled in Last Spring Term but not Graduated	Persistence	First-Year Attrition	Second-Year Attrition
		Fall ²	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring					
Cohort 2012	185	100%	98%	93.5%	90.3%	88.7%	91.9%	85.5%	87.1%	17.7%	11.3%	87.1%	1.6%	88.7%	6.5%	11.3%
Cohort 2013	187	100%	98.4%	92.2%	93.8%	93.8%	84.4%	82.8%	85.9%			62.5%	26.6%	89.1%	7.8%	6.3%
Cohort 2014	218	100%	100%	98.0%	98.0%	90.2%	80.4%						80.4%	80.4%	2.0%	9.8%
Cohort 2015	232	100%	96.7%	95.1%	93.4%								93.4%	93.4%	4.9%	
Cohort 2016	220	100%	100%										100.0%	100.0%		

Figure 4.20 | Albert Nerken School of Engineering

	Original Count from Admissions	Year 1		Year 2		Year 3		Year 4		Year 5		Graduated	Enrolled in Last Spring Term but not Graduated	Persistence	First-Year Attrition	Second-Year Attrition
		Fall ²	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring					
Cohort 2012	185	100%	100%	96.2%	94.2%	90.4%	90.4%	88.5%	88.5%	3.8%	1.9%	88.5%	1.0%	89.4%	3.8%	9.6%
Cohort 2013	187	100%	98.1%	95.1%	93.2%	90.3%	90.3%	89.3%	89.3%			86.4%	2.9%	89.3%	4.9%	9.7%
Cohort 2014	218	100%	98.6%	89.9%	87.1%	79.9%	77.0%						77.0%	77.0%	10.1%	20.1%
Cohort 2015	232	100%	98.6%	91.6%	90.2%								90.2%	90.2%	8.4%	
Cohort 2016	220	100%	98.5%										98.5%	98.5%		

1 - Persistence is defined as the number of students Graduated plus the number of students enrolled in last spring semester listed but who are not graduated.

2 - Year 1 Fall Headcount is used as Cohort Baseline to calculate retention, graduation, persistence and attrition rates.

3 - One student labeled start term FA2013 however the student data shows deferral with start in FA2014 and enrolled full-time. Student removed from Cohort 2013 and placed into Cohort 2014.

Figure 4.21

ACADEMIC PROFILE GRADUATED STUDENTS BY COHORT

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean SATM+SATCR ²	Mean SATW ³	Academic Index ⁴	Mean First Term GPA
COHORT 2012	158	90.1	651	640	649	2840	1334	652	2887	3.35
COHORT 2013	129	91.5	660	646	661	2881	1366	675	2956	3.31

Figure 4.22

ACADEMIC PROFILE IN NON-GRADUATED STUDENTS BY COHORT

	Headcount	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean SATM+SATCR ²	Mean SATW ³	Academic Index ⁴	Mean First Term GPA
COHORT 2012	27	90.2	678	645	666	2891	1308	668	2878	2.71
COHORT 2013	57	90.5	650	630	641	2826	1282	640	2828	3.11

1 - Academic Index= 10*(HSGPA) + SATM + SATCR + SATW

2 - ACT Composite Scores were converted using College Board ACT and SAT Concordance Tables.

(<https://research.collegeboard.org/sites/default/files/publications/2012/7/researchnote-2009-40-act-sat-concordance-tables.pdf>) The ACT Composite score concurs to the sum of SAT Critical Reading and SAT Mathematics scores.

3 - ACT English scores were converted using College Board ACT and SAT Concordance Tables. (See Note #2 above) The ACT English score concurs to the SAT Writing score.

4 - Academic Index= 10*(HSGPA) + (SATM + SATCR) + SATW

The Cooper Union is among top-tier private, competitive universities in which the academic profile of admitted students (figures 4.21, 4.22) is in the 90th percentile on the SAT, and high school GPA of “A-.” Benchmarked, aspirational schools for The Cooper Union are in the most competitive category of selectivity, citing a first year retention rate of 96-98%, and graduation rates nearing 90%- 93%.

- The Cooper Union’s first year retention rates (reflected in the table below) average 93%, and are consistent with those of its selective peers and slightly lower than that of its aspirational peers (96%–98%).
- The Cooper Union’s 6-year graduation rate for Cohort 2009, reported to IPEDS, was 84%. This rate is lower than that in The Cooper Union’s selectivity peer group. Based on first term persistence outcomes, The Cooper Union should enjoy a graduation rate nearer 90% to 92%. In order to explore improvement and effectiveness opportunities, systems data (available only up to 2012) was pulled and cleaned to track students’ term-to-term persistence and progression patterns.
- A gain in retention is already noted in the 5-year Cohort 2012 graduation rate of 85.4%. Based on active students in the system as of year 5, there are indications that the 6-year graduation rate will increase to 87.6%.
- Nonetheless, comparing The Cooper Union’s retention rate to that of its first year persistence as well as that of its highly selective peers suggests opportunity for improvement. Losses between the Spring of Year 1 and Fall of Year 2 suggest there might be opportunity for improvement.
- A review of the term persistence patterns since 2014 reflect a worrying dip in the first year persistence from an average of about 94% in 2012 and 2013; to about 91% in 2014 and 2015. A serious drop in second year persistence is noted for Cohort 2014 and is being explored. A “leaver” analysis of non-enrolled students is underway with preliminary findings regarding progression, term performance and gateway math performance.

In order to identify opportunities for targeted interventions, persistence and progression data has been also assembled, including term cumulative GPA, and gateway course performance. “Leavers”—students who are not enrolled in any term—have been disaggregated with accompanying information on entry-level profiles. Preliminary findings have shown that:

- there are generally no differences in the admission profiles of “persisters” as opposed to “leavers”
- “leavers,” although high achievers (figures 4.23, 4.24), earn lower first-term GPAs (this is noted particularly among art students)
- first-term GPA is strongly linked to performance and persistence
- analysis of progression patterns of engineering students suggest that the first math grade is linked to first-term GPA and attrition patterns

Figure 4.23

THE COOPER UNION YEAR 1 LEAVERS | SAT SCORES

Year 1 Cohorts

	Head Count	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹
COHORT 2012	185	91.8	683	646	652	2899
COHORT 2013	186	91.5	691	652	666	2924
COHORT 2014	214	92	700	646	652	2918
COHORT 2015	230	92	697	652	652	2921
COHORT 2016	219	93.2	691	650	644	2917

Attrition by Cohort

Total YR1 and YR2 LEAVERS	YR1 Attrition	YR2 Attrition	YR1 and YR2 Attrition
24	6.5%	6.5%	13.0%
19	5.9%	4.3%	10.2%
45	8.4%	12.6%	21.0%
12	8.7%		
TBD			

YEAR 1 LEAVERS—Academic Profile by Cohort

	Head Count	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean YR1 FA GPA	Mean YR1 SP GPA
COHORT 2012	12	88.5	672	641	639	2837	2.48	1.39
COHORT 2013	11	89.4	716	661	666	2937	2.75	2.19
COHORT 2014	18	90.0	713	639	660	2912	2.80	1.31
COHORT 2015	20	90.3	653	639	622	2817	2.75	1.39
COHORT 2016	--	--	--	--	--	--	--	--

Retention by Cohort

Total YR1 and YR2 PERSISTERS	YR1 Retention	YR2 Retention
161	93.5%	87.0%
167	94.1%	89.8%
169	91.6%	79.0%
210	91.3%	
219		

YEAR 1 PERSISTERS—Academic Profile by Cohort

	Head Count	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean YR1 FA GPA	Mean YR1 SP GPA
COHORT 2012	173	92.0	684	647	653	2904	3.31	3.23
COHORT 2013	175	91.6	690	652	666	2923	3.28	3.25
COHORT 2014	196	92.1	698	646	654	2920	3.24	3.08
COHORT 2015	210	92.2	701	653	654	2929	3.23	2.99
COHORT 2016	219	93.2	691	650	644	2917	3.22	3.03

Figure 4.24

THE COOPER UNION YEAR 2 LEAVERS
ACADEMIC PROFILE BY COHORT

	Head Count	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean YR1 FA GPA	Mean YR1 SP GPA	Mean YR2 FA GPA	Mean YR2 SP GPA
COHORT 2012	12	89.4	670	650	676	2891	3.03	2.83	2.27	1.99
COHORT 2013	8	91.3	668	644	639	2863	3.20	3.35	3.05	2.78
COHORT 2014	27	89.8	710	641	672	2921	3.10	2.75	2.50	1.79
COHORT 2015	--	--	--	--	--	--	--	--	--	--
COHORT 2016	--	--	--	--	--	--	--	--	--	--

Figure 4.25

THE COOPER UNION YEAR 2 PERSISTERS
ACADEMIC PROFILE BY COHORT

	Head Count	Mean HSGPA	Mean SATM	Mean SATCR	Mean SATW	Academic Index ¹	Mean YR1 FA GPA	Mean YR1 SP GPA	Mean YR2 FA GPA	Mean YR2 SP GPA
COHORT 2012	161	92.2	685	647	651	2905	3.34	3.26	3.26	3.20
COHORT 2013	167	91.6	691	652	667	2927	3.28	3.24	3.20	3.22
COHORT 2014	169	92.5	697	647	651	2920	3.26	3.14	3.12	3.17
COHORT 2015	210	92.2	701	653	654	2929	3.23	2.99	2.96	2.95
COHORT 2016	219	93.2	691	650	644	2917	3.22	3.03	--	--

Given that The Cooper Union’s freshman class is tightly clustered by achievement thresholds within their programs of study, it will be important to assess the attitudes and tolerances among students who see themselves among an academic “elite.” As The Cooper Union plans for first year assessments in the fall, the institution is also exploring how to develop a coherent, support strategy aimed at the unique challenges in supporting “optimal” performers, especially in shaping their ability to manage to new kinds of academic and interpersonal challenges.

Planning for Orientation and the Freshman Year are underway with Student Affairs, the Campus Collaborative, and the Diversity Task Force. Themes regarding community building, belonging and identity development, engagement and efficacy, and resilience are emerging as priorities.

ACADEMIC ADVISEMENT

The three schools and the Faculty of Humanities and Social Science maintain school based advisement models and methods of advisement, and establish academic standards that are important for enrolled students progress.

The three Schools and the Faculty of Humanities and Social Science use different advisement methods that are each suited to the unique academic requirements of the program and discipline. All students use the self-service module (Student Self-Service) of the institution's enterprise system, which allows them to request advisor approval for courses. Once approved, a student may register at the start of their designated registration period. The schools have varying dependence on Student Self-Service, although all three must ultimately direct students to the site to officially register into classes that they arrange with their advisors.

The Irwin S. Chanin School of Architecture The School of Architecture has two principal advisors: the Associate Dean, and the Academic Administrator, who, along with Dean of Architecture, are actively involved in advising. Meeting with the Academic Administrator is the first step in the advising process. The academic administrator meets with incoming students and explains how the advising process works and other key elements of the registration process, such as the curriculum, course selection, and making progress towards the degree. The Associate Dean also does academic advising as well as more involved advising such as transfer credit evaluation, leave of absence/withdrawal discussions, etc.

Communication begins for all students with "Welcome to the New Academic Year" emails for all class levels (freshman, transfer, returning and M.Arch II students) conveying general information about the school as well as specific information for their year. New students receive the Credit Evaluation Form which outlines the B.Arch curriculum sequence as well as information about classes, scheduling, advising, academic planning, rules and regulations, etc. Returning students also receive this information as well their individual Credit Evaluation Form, which tracks coursework completed thus far, current registration in terms of meeting upcoming requirements, etc. The Academic Administrator is available to meet, in person with each incoming student and all returning students. The majority of students exercise this option. Returning students make adjustments to their upcoming registration (completed in the prior semester) based on the outcome of the previous semester and new students can discuss and better understand their new registration, the curriculum sequence, and potential course options as they advance through the curriculum.

New first-year students are pre-registered for their first Fall semester of study, receive schedule and other information to familiarize themselves with the registration process and potential course options as they advance through the curriculum. Starting with their Spring semester of study, freshmen students will be responsible for registering themselves via The Cooper Union's online registration program. New transfer students meet with the Academic Administrator to discuss coursework completed at their previous school and potential transfer credit evaluation in order plan current and future registration and projected graduation date.

Students are eligible to register into elective courses in the third, fourth, and fifth years. Students are required to complete 30 elective credits. Of those 30 credits, 6 credits must be completed in Humanities and Social Sciences and 7 credits must be completed in non-Architecture classes. The elective countdown clock is a running tally of elective credits, intended to keep a student constantly aware of his/her elective situation to strategize elective registration semester-by-semester.

As the smallest academic division of The Cooper Union, students are well aware of and acquainted with the Academic Administrator, the Associate Dean and the Dean so they know whom to contact with any academic or advisement questions. General information about the registration process, timetable and deadlines is posted on the website by the Registrar's Office, whose contact information is also provided.

School of Art The School of Art has an Academic Advisement office with a faculty member designated as the Academic Advisor and an Associate Academic Coordinator who works with students on semester exchange to and from the School of Art. The Advisement office prepares credit audits for the students twice an academic year. The Advisor and Advisement Coordinator work closely with the Academic Standards Committee and the registrar to ensure that students are on track for graduation. The Advisor also evaluates transfer credits credentials (credits to be awarded) and determines class placement for incoming transfer students.

The first year of the School of Art program is highly structured and consists of "Foundation" courses. As such, students do not need much advising until their sophomore year, although they must meet with one of the academic advisors to discuss their academic plans after the Foundation courses are completed.

Students are free to make advisement appointments at any time to ask questions regarding the process, with some of the smaller day-to-day maintenance questions answered via email. Mandatory advisement meetings are required a few weeks before the next semester's registration period to ensure that students stay on track for satisfactory academic progress, and subsequent meetings throughout the year allow students to add credits to given courses to expand on work they're doing or make up needed credits. The School of Art also conducts mid-term reviews to evaluate student performance and progress for more intrusive guidance and support

Since the School of Art has only two advisors, the students always know who to ask should any advisement questions arise. Similarly, as in the School of Architecture, academic progress and advisement can be answered directly by the academic advisors, with specific registration questions directed to the Registrar's Office.

Albert Nerken School of Engineering The advisement procedures in the School of Engineering are designed to handle the larger student population of the School and the demanding curriculum plans in the engineering programs.

All freshmen engineering students are assigned the same advisor, the Freshman Advisor. They are informed of this during orientation, as well as in communication packets sent out by the Admissions office. The Freshman Advisor ensures that the freshmen have the correct schedule based on their major and the assignment of any AP credits. First-year engineering schedules can be very complicated because of AP credit: students may qualify for one or two second-year classes that are scheduled to accommodate sophomores. A great deal of work goes into adjusting schedules so that each freshman has an academic program that they are qualified and wish to take.

Beginning in their second year, engineering students are assigned advisors based on their majors. These advisors consist of full-time faculty from their respective majors. Students can request a schedule through the online program Student Self-Service, and the advisors approve it. The requests and approvals, and any discussion thereof, may occur in Self-Service through in-site messaging or via email, or in person.

A list of all students and their advisors is provided at the beginning of the fall semester for all incoming sophomores through email and a hard copy is posted in the Engineering Office. Students may also contact the Registrar's Office for this information. Once assigned, these advisors follow their students for the duration of their time at The Cooper Union unless a student switches majors, at which point they are provided an advisor in their new major.

Faculty of Humanities and Social Sciences While Humanities does not offer a degree, they do provide advising for the Humanities requirements and electives. These requirements are fully covered in the academic course plan for the three schools, but some advising is provided by a full time Humanities Professor and the Dean of Humanities. Academic advising in HSS provides students with information about retaking failed classes, selecting alternative classes should there be an over enrollment issue, and adding extra credits to existing HSS courses. Should students wish to receive extra credit in HSS, they must fill out an HSS-specific extra credit form, which is reviewed by the HSS faculty.

ACADEMIC STANDARDS

Policies and Procedures Every year, the three Academic Standards committees convene shortly after the end of each semester, in January and June. Once all grades are submitted, each school is able to generate a list of students who have fallen below certain academic thresholds. These students are mailed a formal hard copy letter via USPS Express Mail from the Registrar's Office. The letter varies slightly depending on circumstances, but gives the date and time of the Academic Standards Committee meeting and invites the student to attend in order to discuss their performance and recovery plans. In addition, the students are contacted electronically—the schools of Art and Architecture send their own emails, while engineering students get an email from the Registrar's Office consisting of the text of the official letter.

Each Academic Standards Committee bases its decisions on several factors including current and previous term grades, potential for recovery, past work, and student input. Students are informed of the probation/dismissal decision at the conclusion of the hearing, whether the result is probation, dismissal or withdrawal; a second round of letters is also mailed to provide formal notice. A student who is dismissed, for example, would be told at the meeting, and then would receive the official letter notifying them of the decision 1-2 business days later with a deadline for executing their withdrawal.

Academic standards are provided in admission documents, laid out in the catalog, and known by advisors and peers. In addition, the Academic Standards Committee meets one on one with all students who attend, so in cases of probation the goals for the next academic semester are clear.

Academic Probation All three schools have a policy of automatic probation if a student's GPA falls below a certain level. This cutoff and other specifics are listed in the catalog. When a student is placed on automatic probation, they are informed in the letter summoning them to the Academic Standards Committee meeting. The letter also provides the reason and cites the relevant catalog page number.

- The School of Architecture expands on this with a policy of "final probation." This occurs when a student receives a grade of **F** in Architectonics, Design, or Thesis (these classes being part of a continuous sequence that students must take once per semester, and which form the backbone of the five-year program, in essence gateway courses). In such cases, the student must repeat the studio and receive a **C+** in the repeated class or risk dismissal. A student may also be placed on final probation if he or she is placed on automatic probation for two semesters. Students are on probation if they fall into one of three categories: a less than 2.0 GPA, a grade of **C-** or less in Design sequence, or both. Such a distinction allows the Committee to tailor assistance towards students based on areas that most need improvement. Architecture's small size allows for extremely proficient manual tracking of students placed on all types of probation.
- The School of Art has instituted a mid-semester review meeting where the faculty are polled and asked to identify students currently at risk of failing to achieve the minimum academic standard in their class. The students are asked to appear at a meeting of the Academic Standards Committee (voting members only) and the Academic Advisor to discuss the nature of their academic difficulties and remedies that could assure their success at the end of the semester. This meeting along with the Foundation review meeting works as a "safety net" for students who are struggling in one or more of their courses. If the student is ultimately placed on probation, then the Academic Standards Committee, in consultation with the Advisor, will construct an academic recovery program that they must follow until they are no longer on probation.
- In Engineering, any student placed on automatic probation is assigned an advisor who is a member of the Academic Standards Committee. The student must meet with this advisor not later than the second week of the probation semester, and then once a month thereafter to put a recovery plan in place.

- A failing grade in one of the Humanities core (part of the four required courses, HSS 1-4) is included on the ASC list from each school. Tracking grades in these courses is especially important because they are prerequisites for all other Humanities and Social Science electives.

Finally, all students placed on probation are encouraged by their respective Academic Standards Committee to seek advice from the Dean of Students for non-academic issues. The Dean of Students is a source of informal, situational counseling which can apply to personal or academic issues; emphasis is on attending to the students' personal needs.

STUDENT AFFAIRS

Overview The Office of Student Affairs at The Cooper Union is committed to providing all Cooper students with the support, guidance, advocacy, and agency that they need to be successful. Student Affairs strives to provide students with the tools they need to become positive agents of change locally, nationally, and globally. The Office of Student Affairs consists of professional educators who work to provide all students with essential support systems and opportunities for engagement that position them to succeed in the classroom and beyond. The Office of Student Affairs encompasses many different services to help students in their personal and educational journey at Cooper Union and beyond. These services include: Career Development, Residence Life, Athletics, Campus Life, Health and Medical Records, Counseling Referrals, Student Support and Advocacy, Student Judiciary, Student Clubs and Organizations, Orientation Programs, and Commencement.

Student Affairs comprises a framework that engages and supports students to address issues of mental health, racial and social justice, career readiness, sexual health and violence, and persistence to graduation for all students. The Division of Student Affairs continues to play an increasingly critical institutional role in supporting student engagement, retention, policy decisions, and equity for all in The Cooper Union community.

Orientation Programming The Office of Student Affairs hosts an annual collaborative week-long New Student Orientation immediately preceding the start of the fall semester. Orientation programming offers various opportunities for students and their families to get acclimated to The Cooper Union community. New students get to know one another, their new surroundings, and Cooper Union staff, faculty, and administrators. In addition, students attend major-specific meetings and sessions to learn about course offerings, faculty, and academic advising. Students also take placement exams and a Writing Center diagnostic, as well as attend sessions on the history of The Cooper Union, personal finances, personal safety, sexual health, mental health and wellness, career development, and academic integrity. New students are required to take two online courses related to sexual and dating violence and responsible use of alcohol before they are able to register for courses. Student clubs offer various social and recreational activities during orientation week as well. Orientation plans and schedules are put in place through discussion among student affairs staff, student leaders, and faculty.

Student Activities, Athletics, and Student Government There are approximately 50-60 active student clubs and organizations at The Cooper Union, and students form new clubs each year. Student groups span a wide variety of interests and purposes and serve to shape life on campus. There are currently social, cultural, and ethnic groups, as well as performance (theater, dance, music) groups, and professional societies. There are also honor societies, Greek organizations, and literary groups including a student newspaper, *The Pioneer*. The clubs have sponsored lectures, alumni networking events, exhibits, field trips, conferences, poetry readings, films, dinners, publications, performances, ice cream socials, international food fairs and community service work. Each year, the clubs jointly sponsor the Fall Festival where new members are recruited and upcoming events are promoted. Professional societies compete in national and regional competitions and have achieved an impressive record of success.

Peter Cooper believed that the students at his institution could serve New York City, our nation, and the world as “preeminent examples of all the virtues.” To foster this mission, he recommended to the Trustees of The Cooper Union that students be given the opportunity to devise “such rules and regulations as they, on mature reflection, shall believe to be necessary and proper.” As such, the Joint Student Council (JSC) is the governing body that, according to the mission of the JSC as published in the constitution, “maintains a platform for discussion and takes action to benefit the student body.”

The Joint Student Council (JSC) has representatives from all class years in all three schools and allocates funding to student clubs through the Joint Activities Committee (JAC). The Joint Activities Committee is composed of Student Council members selected from each of the three schools. Joint Activities Committee policies and procedures and the Joint Activities Committee Constitution govern the processes around formation and funding of clubs. The Joint Activities Committee has a set budget each year to allocate across the clubs to fund their various activities. Some organizations also fundraise to supplement allocated funds and/or to raise money for charity and philanthropic organizations.

Students at The Cooper Union also participate in an extensive program of athletic and recreational activities including varsity women’s and men’s volleyball teams, basketball, and soccer teams. Cooper Union students have access to two athletic facilities close to the school in order to practice and compete.

Career Development The Center for Career Development provides in depth support to students and alumni through its career counseling program, which is intended to teach students and alumni how to use self-knowledge in relation to career decisions and goals, conduct career-related research, identify and pursue opportunities, prepare competitive application materials, and document and present their accomplishments. These abilities will help students and alumni to secure opportunities that enable them to excel in both their careers and further education. The Career Center also offers workshops on résumé and cover letter writing, interviewing strategies, portfolio development, self-assessment, job and internship searching, professional networking, salary negotiation, copyright law, and it hosts weekly drop-in hours for students to ask questions and discuss career-oriented topics. The Career Center also offers the Myers-Briggs Type Indicator (MBTI) personality assessment and the Strong Interest Inventory free of charge to students and alumni.

While the Career Center maintains strong organizational attendance at career fairs, a robust roster of organizational and alumni presentations, an effective on-campus interview program, and partnership programs with universities to augment its own programs, it continues to seek new and diverse external relationships to ensure that students have access to a wide range of opportunities. To further this aim, it supports students' professional development by offering professional association conference travel funding and by working closely with student professional groups to organize worthwhile programs and target organizations and alumni of interest to students for these programs. The Career Center also hosts an alumni-student mentoring program to connect students with Cooper Union alumni for the purposes of career exploration and for professional guidance. In addition, it provides a paid internship program that supports student learning and development experiences in professional environments outside the academic setting.

The Career Center also understands that not all students seek traditional employment and educational opportunities. It offers valuable programs that provide students with insight into grants, scholarships, and fiscal sponsorship to help fund project-based work. It also connects students to funded opportunities abroad, such as Fulbright grants and residencies to broaden their horizons and foster stronger international professional relationships. The Career Center also provides programs on freelancing, independent work, and work abroad to expose students to the changing shape of the economy.

The Career Center offers graduate study information sessions, presentations, and discussions to ensure that students understand future educational options. These programs include teaching students how to research academic programs, discussion of application processes, writing personal statements, organizing visual materials, securing appropriate letters of recommendation, and strategies to fund further education. Part of this process begins early by offering programs that encourage students to pursue Research Experiences for Undergraduates (REUs) to expose them to research universities in the U.S. and abroad.

Extensive online resources for students and alumni are available on the Career Center's website. They include an online job and internship board, information on licensure, salaries, access to GoinGlobal, which is an international career resource for both domestic and international students, and it keeps online archives of key programs to both document its programs and as a resources for students and alumni.

The Center for Career Development conducts a graduating student survey and publishes information about students and graduates' professional pursuits and accomplishments, including sample employer and internship sites, graduate schools, external metrics on licensure, alumni career presentations, and Fulbright grant recipients and presentations. The graduating student survey also invites feedback from students, which is used to analyze and improve programs and resources.

Health and Counseling College students often experience stress and anxiety from being in a new environment, the rigors of their academic responsibilities, and various other reasons. To assist students who may be dealing with such issues, the Office of Student Affairs maintains partnerships with local providers for counseling, mental health and related supportive services, and has a full-time staff member, the Student Care Coordinator, to offer counseling for students on-campus. On-site and near-site counseling sessions are free of charge for all Cooper Union students. To best meet the needs of students' demanding schedules, The Cooper Union offers three counselors, each with a different schedule. On-site and near-site free counseling is designed to provide students with an opportunity to talk with a counselor to assess their needs. If a student needs continued care, they will be referred to a local off-campus agency, equipped to provide that care. Counselors will generally meet with a student for up to three sessions and then provide appropriate referral information. The Office of Student Affairs also maintains information about off-campus counseling referrals and mental health resources. In addition, programs and events exist to raise awareness of mental health issues and to educate students on the importance of self-care. The Cooper Union also has procedures in place for student illness and medical leaves of absence.

Third Party Student Services The Office of Student Services works with independent counseling contractors that are formally evaluated by the Dean of Student Services based on student feedback and personal meetings with the counselors. Prior to the hiring of an official Title IX Coordinator, for several years, AORTA Title IX facilities were contracted to provide Title IX workshops to the community. Their services to the community were assessed by the Dean of Student. Currently the Title IX Coordinator oversees all Title IX workshops on campus. Other training programs, such as EVERFI online Title IX and Alcohol Education training are assessed both formally and informally by the Office of Student Services. For example, the number of Title IX and alcohol violations annually is the primary metric for evaluating the effectiveness of these services.

Disability Services The Cooper Union makes reasonable accommodations and modifications to policies, practices and procedures and provides auxiliary aids and services necessary to meet the needs of students with documented disabilities. Students with disabilities seeking any accommodations, modifications or auxiliary aids or services to support their ability to participate fully in The Cooper Union experience—including anything pertaining to one of The Cooper Union’s distinct schools—work directly with the Dean of Students for assistance. The Dean of Students works closely with the Deans and Academic Advisors of the student’s school arrange for focused and supportive assistance to provide equitable opportunity for academic success. Accommodations are arranged for to allow a student additional time, tools, and/or resources to fulfill the obligations of a course and degree program. An accommodation is not designed or intended to alter pedagogy. Services are available to students who have registered with the office by submitting appropriate documentation through the Office of Student Affairs. As disabilities and their accommodations change over time, accommodation requests do not automatically carry over from one academic year to the next. Students are required to contact the Office of Student Affairs and update their status and accommodation request(s) on an annual basis. As each class and each student’s needs are unique, it is important that there be a dialogue between faculty and student.

Housing and Residential Education Cooper Union offers apartment-style housing for approximately 175 students on campus in the Student Residence Hall at 29 Third Avenue. This space makes it possible for students to live in a community with their peers while sharing a collegial approach to learning. Although housing is not guaranteed, most first-year students do live in the Residence Hall. Resident assistants, as well as two professional staff members, staff the building. The Residence Hall staff facilitates various educational and social programs throughout the academic year to cultivate a community and encourage students to engage with their peers, broaden their perspectives and enhance personal growth. The Student Residence Hall provides space for students to study and socialize. Residential students abide by policies and procedures, which exist to create a positive and productive co-curricular experience. Housing and Residential Education staff also provides resources and programs regarding finding housing for students beyond their freshman year once it comes time to transition out of the Residence Hall and into an apartment off-campus.

Diversity and Inclusion The Cooper Union is committed to the values of justice, equity, and inclusion and offers resources to members of the community who may have been targeted or excluded from full participation in educational opportunities on the basis of an identity or affiliation. The Cooper Union’s Title IX Coordinator is on staff to implement the standards and guidelines of this policy as they pertain to issues involving students. In addition, new students are required to complete an online course that addresses issues of sexual assault, relationship violence, stalking, and sexualharassment. Periodic lunchtime workshops and discussion groups on diversity-related issues are provided to encourage students to engage in dialogue on complex topics in a safe space.

In 2015, all restrooms in the Foundation Building, 41 Cooper Square, and those on the 3rd floor of 30 Cooper Square in the Office of Admissions were converted to gender neutral facilities in order to help provide a more inclusive environment.

Evaluating the Overall Student Experience The annual General Exit Survey, previously administered by the Institutional Assessment staff, seeks to evaluate the overall experience of students at Cooper Union including quality of courses, faculty, and facilities, and access to faculty, administrators, and facilities. The survey also seeks to gain feedback on students' social experience.

CHAPTER V: EDUCATIONAL EFFECTIVENESS ASSESSMENT

INTRODUCTION

One of the hallmarks of an effective institution of higher education is its ability to define student learning outcomes (SLOs) and to assess and describe the impact of its educational offerings on students' achievement of these SLOs. The Cooper Union focuses on offering outstanding academic programs, preparing students for a larger role in society, and giving them a challenging, interactive curriculum that fosters rigorous, humanistic learning. To ensure that the educational quality of the academic programs is maintained in order to meet learning goals, many standardized approaches to assessment are used for continuous improvement.

This section of the Self-Study Report synthesizes and summarizes: (1) a review of the educational goals for the institution and its schools and programs, and (2) approaches to curriculum and curricula reform, and (3) methods used to assess academic quality and student learning. The focus of the educational effectiveness assessment is to confirm that The Cooper Union meets compliance with the following standard, as defined by the Middle States Commission on Higher Education (MSCHE):

“Assessment of student learning and achievement demonstrates that the institution’s students have accomplished educational goals consistent with their program of study, degree level, the institution’s mission, and appropriate expectations for institutions of higher education.”

EDUCATIONAL GOALS

The Cooper Union constantly measures its students' attainment of institutional, program-level, and course-level goals. The administration, faculties and student affairs personnel then use this information to assess the educational and student development offerings to make changes if needed that potentially help our students achieve learning outcomes.

Institutional learning goals continue to be inspired by the founding principles of The Cooper Union, as well as its current mission. On an institutional level, Cabinet meetings, led by President Laura Sparks, include all deans, associate deans, and officers, and take place on a weekly basis. Educational goals are often discussed at these meetings, among the diversity of issues covered.

Each of the three degree-granting schools, as well as the Faculty of Humanities and Social Sciences, outline their pedagogical objectives through their respective mission statements and course offerings. These core principles are fostered by the dean and associate dean (whenever applicable) under the framework of the governance, committee structure, and faculty meetings. Assessments and adjustments to the curriculum are made through recommendations via the curriculum committee structure and confirmed through votes at larger faculty meetings. The Humanities and Social Sciences curriculum committee consists of thirteen members, including students and faculty members from each School. This range of representation ensures a focus on the important educational objectives that support the curricula of Architecture, Art, and Engineering.

INSTITUTIONAL LEARNING GOALS (ILGS)

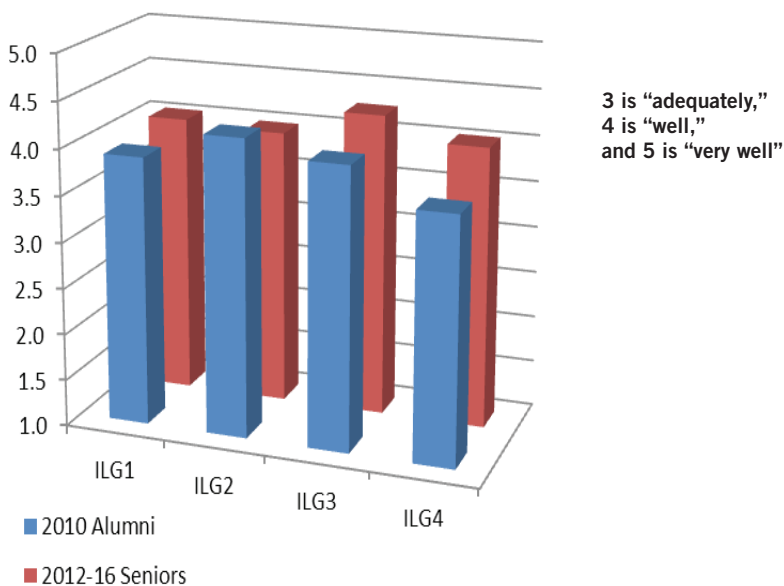
The Cooper Union's institutional learning goals are:

1. Cooper Union students will demonstrate a mastery of the basic principles of design and research within their profession and exhibit both urban and global knowledge. (ILG1)
2. Enriched by the studies of the humanities and social sciences, Cooper Union students will demonstrate the ability to think creatively and analytically about important ideas, questions and problems in their professional fields. (ILG2)
3. Cooper Union students will acquire the fundamental knowledge, skills, and motivation that enable them to make enlightened contributions to society. (ILG3)
4. Cooper Union students will acquire the ability to present their findings effectively to peers, professionals and the general public. (ILG4)

The Cooper Union contracted Hanover Research to survey our alumni in 2010 and our graduating seniors from 2012 through 2016. The survey focuses on the students' impression of how well The Cooper Union helped them to achieve these goals. A 5-point Likert scale from "not very well" to "very well" measures the alumni's and seniors' impressions. Figure 5.1 summarizes, for each ILG, the mean response of the 2010 alumni and the aggregate mean response of the graduating seniors from 2012 through 2016.

Figure 5.1

ALUMNI AND SENIORS SELF-ASSESSMENT OF ILGS



The mean responses range from 3.6 to 4.3 and indicate a moderate to positive student impression that the institution helped them to achieve the ILGs.

The survey results regarding the students' impressions of how well The Cooper Union helped students to achieve ILGs are the only assessment data provided in this section of the Self-Study (figure 5.1). While there is minimal data reported, the administration, faculty, and student affairs personnel do collect and review data on standardized tests, locally developed exams, portfolios, projects, capstone experiences, and student emotional and intellectual development. During the current transition, The Cooper Union, through its shared governance practice, is in the process of documenting and organizing these data collection practices. The aim is to have multiple measures to review, consume, and communicate in order to inform policy, practices, and instruction to improve attainment of student learning outcomes.

SCHOOL AND PROGRAM LEARNING GOALS AND OBJECTIVES

As stated earlier, each school and program has goals/objectives and assessment procedures for their associated goals/objectives. In general, The Cooper Union's, schools and programs use direct (portfolios, oral presentations/critiques, examinations, project reports) and indirect (alumni surveys, senior exit surveys, student course evaluations) measures to indicate student achievement of these goals/objectives and use that feedback to inform program changes. In organizing and documenting the institution's educational effectiveness, the structure of all goals and objects are being reviewed and adjusted to conform to an agreed upon uniform standard.

The Irwin S. Chanin School of Architecture

The program goals are to:

1. prepare students for a breadth of opportunities in the profession
2. provide an environment in which students develop their knowledge and design skills within a framework of studios and courses that stimulate research and debate into the nature and role of architecture
3. encourage students to develop their individual interests and strengths, with an emphasis on fundamentals and a commitment to equip graduates with a lasting ability to produce meaningful architecture that synthesizes the social, aesthetic, and technological
4. encourage students to express themselves verbally and visually
5. engender a strong sense of the responsibilities of service and leadership, teamwork, and individual creativity
6. introduce students to the principles of architectonics, the investigation of program and site, structures and environmental and building technologies, in a comprehensive and integrated curriculum

School of Art

Students will:

1. develop an individual artistic vision through the studio experience
2. acquire an intellectual grounding of studio practice through the study of history, theory and criticism in the visual arts
3. be introduced to the diverse range of critical responses and alternative models in relation to the prevailing forms and institutions of cultural production
4. develop the appropriate technical proficiency to materialize their artistic vision
5. conceive of studio practice as a synthesis of formal, historical, critical and technical components

Albert Nerken School of Engineering

The outcomes students should achieve are:

1. an ability to apply knowledge of mathematics, science, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Faculty of Humanities and Social Sciences (HSS)

The goals of the faculty are to develop in students:

1. skills in critical analysis within a range of disciplinary structures
2. skills necessary for an informed citizenship
3. an appreciation of world culture and of America within a global context
4. skills in both written and non-written expression enabling that student to take part in active citizenship and to compete effectively in his or her professional area

ASSESSMENT OF STUDENT ACHIEVEMENT OF LEARNING GOALS

The Cooper Union has placed into practice an array of assessment devices which serve both self-assessment and external evaluations of academic effectiveness, including those of MSCHE (Middle States Commission on Higher Education), the Engineering Accreditation Commission of ABET, NAAB (National Architectural Accrediting Board), and NASAD (National Association of Schools of Art and Design). A matrix of assessment methods (**figure 5.2**), developed by the Performance Council (comprised of faculty and administration), identifies modes of assessment. While the modes of assessment are delineated, many of the means of assessment, such as rubrics for evaluating student performance, are being reviewed and reorganized.

Figure 5.2

MATRIX OF ASSESSMENT METHODS

	DIRECT	INDIRECT
INTERNAL	Admissions Criteria Locally Developed Exams Portfolios Oral Presentations Performance Appraisals Case Studies Exhibitions Desk Critiques	Exit Surveys Course Questionnaires Archival Data (Retention, Graduation rates, Placement)
EXTERNAL	External Examiners (FE Exam) Institutional Benchmarking (AITU Data) Alumni Survey (factual questions) Visiting Critics	Alumni Survey (opinion questions) Study Abroad Program Recruiters Feedback Advisory Council Feedback Personal faculty interactions with Alumni & Employees

These assessment modes and means are driven and managed by the relevant faculty and unit chairs, who define program objectives and measures of outcomes and who link these to academic learning goals (institutional and departmental) and departmental and institutional missions. The schools and HSS use a formal assessment and loop-closing process in which departments meet regularly to ensure that assessment processes within their academic unit are discussed. Identification of learning outcomes and alignment of curricula with these outcomes is done through collective discussion among department members rather than by individual faculty. Faculty members define specific student learning outcomes at the course level. Faculty members play a major role in the identification, implementation and institutionalization of measurement strategies designed to assess the extent to which student outcomes have been accomplished. They use the results of assessment to improve student learning, faculty development and departmental operations. Assessment of administrative, academic and student development units is conducted by the Assessment Office (currently being reorganized) and shared with unit heads. Data collected includes alumni surveys, exit surveys, continuing student surveys, and program surveys. Although the means of assessment are being reviewed, the following (figure 5.3) identifies modes and means of assessment happening at The Cooper Union.

Figure 5.3

MODES AND MEANS OF ASSESSMENT AT THE COOPER UNION

Mode of Assessment	Means of Assessment
Locally Developed Exams	Instructors rating
Portfolios	Faculty group discussion
Final Project Presentations	External Reviewers
Oral Presentations	Instructors rating, external rating
Performance Appraisals	Faculty discussion of project findings
Case Studies	Faculty discussion of project findings
External Examiners	Faculty discussion of analyzed data
Institutional Benchmarking	Deans and faculty discussion of trends
Exit Surveys	Deans, Chairs, and faculty discussion of trends
Course Questionnaires	Individual instructor evaluation, Department Chair discussion of trends and possible causes of concern
Archival Data	Deans, Chairs, and faculty discussion of trends and possible causes of concern
Alumni Survey	Faculty discussion of main trends in the data and possible causes of concern
Study Abroad Program Evaluation	Dean, Chairs and faculty review the assessment results
Advisory Council Discussions (Engineering School only)	Dean and Department Chairs discuss mission and educational objectives with members of the engineering Advisory Council and incorporate their recommendations
Personal Feedback from Employers	Department and Deans discuss feedback on mission and educational objectives

UNIT-LEVEL ASSESSMENTS

Schools and Programs Student achievements and educational goals are also evaluated through periodic accreditation reviews of the Schools of Architecture (NAAB), Art (NASAD), and Engineering (ABET), allowing for outside assessment from the organizations that evaluate each school's degree granting status. For example, in preparation for the recent 2016 NAAB review of the School of Architecture, the school was asked to frame itself within five Defining Perspectives outlined by the NAAB: Collaboration and Leadership, Design, Professional Opportunity, Stewardship and Environment, and Community and Social Responsibility. As part of this effort, the Curriculum Committee analyzed the relevance of these Perspectives to the curriculum and objectives of the School. During the subsequent NAAB Site Visit, the School presented student work from each required course, illustrating how the 26 required NAAB-defined Student Performance Criteria are satisfied by the curriculum. Examples of the Criteria include Design Thinking, Cultural Diversity / Social Equity, Building Envelope & Assemblies, and Professional Conduct. Collectively, they ensure a school of architecture is adequately preparing its students to receive a professional degree upon graduation.

Within the structure of this focused, periodic review, and in general, the content of the student work itself is also a measure of pedagogical objectives. These modes of assessment include quizzes, exams, papers, assignments, thesis exhibitions, shows, and the dialogues that take place during oral presentations.

Projects and Research Beyond the curriculum, students at The Cooper Union often have significant academic experiences working on projects or research that do not naturally fall under the scrutiny of the above assessment procedures and practices. In many cases, the principal outcome of these extra-curricular academic experiences is a tangible product (device, exhibition, poster, presentation, etc.) which relevant faculty are qualified to judge. Examples of such activities and outcomes include, but are not limited to: (i) participation in national and international conferences with peer-reviewed abstracts, (ii) internal public events, such as Cooper's "From the Lab" event, (iii) the Biomedical Engineering Research Scholars program, a competitive externally-funded Cooper program in which participants oral and written presentations are critiqued by faculty, (iv) the Study Abroad program, which administers and reviews a survey on program performance, and (v) disciplinary competitive team projects, such as the Steel Bridge, Formula, and Chem-E-Car teams, which are competitively evaluated externally.

COMMUNICATION OF STUDENT ACHIEVEMENTS AND EDUCATIONAL GOALS

The Cooper Union communicates the results of student achievement in a variety of ways on a regular basis. One of the most prominent methods is through the institutional website (cooper.edu). Achievements are often chronicled as news items on the landing page carousel website. Additionally, each of the three degree granting schools—art, architecture, and engineering—respectively posts information about the accomplishments of its students, either through announcements of scholarships given, graduating senior exhibitions in art, posting examples of exceptional student work, or coverage of successful components of academic programs. Within the School of Engineering, student and faculty research and other scholarship news dissemination occurs through a listing of scholarly publications and an archive of Master of Engineering thesis titles and abstracts. During the academic year, the Office of Development and Alumni Affairs broadcasts highlights of this content to the school’s constituencies on a weekly basis, via their ‘Five Things You Should Know’ emails. These constituencies include individuals who have expressed interest in the school, supporters of the institution, and all living alumni with whom the school is in contact. Likewise, both the Admissions and Communications offices drive this content to the greater public via social media outlets, including Facebook, Twitter, and Instagram. These postings occur numerous times a week during the academic year.

During the academic year, the School of Architecture and the School of Art also disseminate weekly e-newsletters, which often highlight student accomplishments. For the School of Art, the e-newsletter includes announcements of openings for senior exhibitions and graduating requirements for students about to receive a degree. These exhibitions represent the culmination of each student’s training in their area of focus, and are announced to The Cooper Community through designed and printed posters located in the lobbies of the school’s two academic buildings. From 2007 to 2015, the School of Architecture produced an annual newsletter at the end of each academic year. These printed documents served to encapsulate the pedagogical objectives and outcomes across all five years of the curriculum during each academic year.

Student achievements in the Faculty of Humanities & Social Sciences are recognized through a set of annually awarded prizes. These include awards of a first-year core prize, a second-year core prize, an overall achievement in HSS to a graduating student, an award for an outstanding essay in philosophy or ethics by an Engineering student, an award for excellence in the Raymond G. Brown seminar (variable topics), a poetry prize, and, most recently, new awards for an outstanding essay in history and a prize for the outstanding art history essay by a first-year student. The awards come with small cash prizes, some of which are endowed. The prizes are announced at Commencement and communicated in print form as part of the Commencement program. The program also lists awards received by top ranking and exceptional students in the Schools of Architecture, Art, and Engineering.

The Office of Development also reflects academic achievement through the form of “thank you” letters to donors from students who receive named scholarships, awards, and commencement prizes. In their letters, the students write about projects, coursework, extracurricular activities, internships, and future plans. The letters are sent out throughout the year. During the last three years the total number of letters sent, inclusive of financial aid/scholarships, commencement, travel, and other awards is as follows: 121 (2013-14), 165 (2014-15), and 144 (2015-16).

The Office of Admissions highlights student employment obtained during school and academic breaks, competitions in which students compete, current research projects, and both retention and graduation rates. In addition to the print and online methods of dissemination, this information is communicated during on-campus information sessions, as part of state, federal, and third party surveys.

Educational goals are communicated directly to students through course descriptions and syllabi, which specify learning outcomes for each course. These goals are summarized in annual course catalogs and brochures produced by the Office of Admissions and Records. In addition to outlining application requirements, these documents present a window into the curricula and pedagogical objectives of each School, both within the framework and resources of the greater institution and the City of New York.

The curriculum and learning environment of each of the three Schools are also informed by student and alumni surveys. In the School of Architecture, students from each area of the five-year sequence also meet with the Dean and Associate Dean each semester, to assess the overall outcome of the academic year.

CURRICULUM

Improvement Driven by Assessment Results The institution’s academic units are committed to continuous improvement. This commitment is reflected in the ongoing refinement of facilities and services, particularly in curricula innovation over time. The Cooper Union has arrived at a formal process of assessment where goals, objectives and outcomes are explicitly discussed and formulated, assessment methods selected, assessment results discussed and actions taken to improve programs and revise curriculum.

The Irwin S. Chanin School of Architecture The School of Architecture, states that one of its goals is “ensuring that the five-year undergraduate program advances the humanist discipline of architecture as it integrates a wide cultural view that includes non-Western history, environmental ecology, sustainability, and global studies at all levels of the curriculum in design studios and coursework.” In order to meet this goal, the school undertook assessment through the National Architectural Accrediting Board Self Study, Curriculum Committee Meetings, Course Questionnaires, Meetings between the Deans and Students, the Annual Exhibition of Student Work, and Senior Exit surveys. Based on the results of these assessments, the following changes were made:

- Seminars originating in Master of Architecture II program are open to students in 4th and 5th year, offering new course opportunities.
- Students can now earn a minor in one of four areas of the Humanities and Social Sciences: American Studies, art history, literature, and history and society.
- Required 4th year two-semester class “Town Planning” re-configured as a 3rd year required course “Introduction to Urban History and Theories.”
- Studio assignments reflect student input and course needs.
- 4th year studio now incorporates issues of landscape and ecology, with addition of landscape architect to faculty.

School of Art Since 2008, the School of Art has made a number of changes to its curriculum based on feedback from students and faculty. The Curriculum Committee has passed a number of revisions. A few notable ones are as follows. In 2008, it was decided that a class be devoted to performance art, which has been a continuous element of art practice throughout most of the 20th century. The course was developed by the full-time Faculty, approved by the Curriculum Committee, and was introduced in the spring semester of 2011. Another change to the foundation year curriculum was the addition of a “Foundation Project” class, which brought all Foundation year students together around a series of presentations that introduced various artistic practices, critical languages, and criticism, presenting contrasting historical and contemporary models of creating, seeing, speaking, and thinking about art. The course was reviewed several times over the next few years and, after positive feedback from faculty and students, has become part of foundation year.

In the 2011-12 academic year, the committee revised the curriculum for the “Introduction to Techniques” course, an important component of the Foundation Program. The thrust of the revision was to provide a technical grounding to first year students in a broader spectrum of the discipline areas represented in the overall B.F.A. program, beyond the discipline of sculpture. The revised course is aimed at broadening the scope to include techniques and information that support classes in photography, film/video, printmaking and graphic design, and would alleviate the need to cover this material in prerequisite sophomore-level classes.

In 2009, a major change in the graphic design curriculum was approved. Graphic Design I and II were revised to include material previously taught in Typography I. Typography I and II were eliminated and replaced by “Typography” which has Graphic Design I and II as prerequisites. The prerequisite structure for advanced design courses was revised and simplified in order to make the entire discipline area accessible to all BFA students in a manner more analogous to other discipline areas in the school. This resulted in the substantial increase in students enrolling in Graphic Design I and II courses than in previous years.

The proposed revision of the photography curriculum was approved and implemented in fall 2013. The pre-requisite class of Photo II was eliminated (material from that class is incorporated into the revised syllabi of several Advanced Photography classes.)

In fall 2010, the Curriculum Committee, along with colleagues in the Faculty of Humanities and Social Sciences, resumed its efforts to develop a new Foundation Program art history course. A joint subcommittee, and then a joint “working group,” the latter composed of adjunct faculty from both units along with a consultant art historian, worked intensively on this for the entire academic year. The resulting course is the culmination of several years’ discussions and negotiations aimed at evolving a Foundation Program art history course that conforms with current trends in art school pedagogy, students’ interest, and, above all, one that addresses the education of practicing artists rather than art history majors. These changes address students’ desire for a broader range of art history electives to be offered.

Albert Nerken School of Engineering The School of Engineering engages in regular curricular review through its curriculum committee. Though the committee did approve many new courses and organized a major re-numbering of almost all engineering courses, major changes to required courses go to a vote of the full faculty at a regular meeting. A condensed summary of changes to engineering curricula since 2008 is provided here, broken down by major.

In the Department of Chemical Engineering, the faculty voted to move ESC110.1 (now ChE211 Materials Science) from the 4th to 2nd year, removed the requirement for ESC121 (now ESC221 Basic Principles of Electrical Engineering), restructured ChE141 and ChE142 into Heat and Mass Transfer (ChE342) and Separation Process Principles (ChE351), and increased the credit requirements for ChE371, ChE372, (Chemical Engineering Laboratory I and II) and ChE382 (Process Evaluation and Design II). These changes were all informed by student feedback via senior survey and discussed extensively at department meetings.

In the Department of Civil Engineering, ESC120 (Principles of Electrical Engineering) was removed as a requirement (it is no longer covered on FE Exam). CE 351 (Urban Transportation Planning) replaces ESC 120 as a required course in the 2nd year and students are now allowed a 3 credit engineering or science elective in its place during the 4th year.

In the Department Mechanical Engineering, Ch160 (Physical Principles of Chemistry) was replaced with a required 3 credit course ME112 (Statics) in the 1st year, ESC100 (Engineering Mechanics) was replaced with ME211 (Dynamics) in the 2nd year, a required course ME333 (Process Control Laboratory) was added to the 3rd year, and the free elective in the 4th year was changed from 4 to 3 credits.

Lastly, in the Department of Electrical Engineering, the signals and electronics tracks were combined into one track, with associated changes to the new track. Ch160 and CS102 were removed from the curriculum and EID102, ECE160 (Programming for Electrical Engineers), and ECE291 (EE Sophomore Projects) were added. The faculty also voted to increase credits for ECE342 (formerly ECE142, Electronics II) from 3 to 4, and changed the number of credits for ECE393, 394, and 395 (formerly ECE193, 194, and 195) from 1.5, 4, 4 to 2, 3, 3. In the computer engineering track, ECE161 (Programming Languages) is no longer required in the 2nd year but ECE357 (Operating Systems) is now required; also, the minimum number of technical elective credits needed for graduation has changed from 12.5 to 14. In the new signals and electronics track, ECE302 (Probability Models & Stochastic Processes), ECE311 (Hardware Design), and ECE343 (Integrated Circuits) are now required and ECE321 (Control Systems) is no longer required. Also, similar to the computer engineering track, the minimum number of technical elective credits needed for graduation was changed to 14 credits.

Chemistry, Mathematics and Physics These non-degree-granting units also execute bi-annual Unit Assessment Reports, which are integrated into the unit strategic plans, as well as Continuous Improvement Reports. The Departments of Mathematics, Physics and Chemistry each began issuing both Unit Surveys and Alumni Surveys in 2016. The chemistry and physics departments each administer select learning assessments that originate in their disciplines professional communities. In the Department of Chemistry, select advanced courses employ American Chemical Society subject surveys selected by individual professors. In the Department of Physics, the Force Concept Inventory and Mechanics Baseline Test, both of which are national standards, are administered.

Humanities and Social Sciences The Cooper Union has contracted Hanover Research to collect data on students and the institution over the period from 2008 to the present date. In the faculty of Humanities and Social Sciences (HSS), many new courses have been approved based on student and faculty feedback and the faculty undertook an analysis and revision of the core curriculum in 2015. A summary of how HSS has implemented changes as the result of assessments is given on the following page (**figure 5.4**).

Figure 5.4

HSS ASSESSMENT RESULTS AND IMPROVEMENTS

SPECIFIC ASSESSMENT RESULT	CHANGE/IMPROVEMENT IMPLEMENTED
<p>Assessment goal #1 Need for greater support for writing training at all levels.</p>	<p>Discussion within the Curriculum Committee that the Writing Center be given additional funding and made a focus of fundraising. Creation of Alpert Writing Associate to work specifically with engineering students.</p>
<p>Assessment goals #2-4 Need to continue expansion of disciplinary offerings in areas not currently present in the curriculum.</p>	<p>Creation of new courses in several fields, including Asian history, Modern Middle East history, queer studies, philosophy of science</p>
<p>Assessment goal #4 A survey among students in the art history survey initiated a discussion leading to a new art history core survey. Desire by students for greater exposure to modern and contemporary work so as to more fully support professional training in the School of Art.</p>	<p>Two-year pilot course proposed, reviewed by Curriculum Committee. Periodic reports from the instructional team teaching the course, demonstrating continuous self-evaluation by the instructors. Conclusion of the two-year pilot at end of spring 2013 semester, with revisions and improvements based on student and self-evaluation by the instructors.</p>
<p>Assessment goal #4 Curriculum committee perceived need to increase social science topics in the fourth semester capstone course (HSS4) so as to provide earlier and deeper exposure to more fields, ideas.</p>	<p>Motion was passed by Curriculum and new distribution of topics was established, resulting in more social science sections among the dozen or so from which a student would choose.</p>

These changes and additions are all proposed to and reviewed by the HSS Curriculum committee, which includes student representatives from each school for their feedback.

CHAPTER VI: PLANNING, RESOURCES AND INSTITUTIONAL IMPROVEMENT

INTRODUCTION

Planning, resource management, and institutional improvement are critical to ensure that an institution can fulfill its mission. As viewed within the context of a clear mission statement, institutional strategic planning allows for an institution to plan budgets, allocate resources, and to ensure that both the information technologies and building facilities support the educational mission of the institution. In January 2018, the Free Education Committee submitted a Recommendation Plan to the Board of Trustees that focuses on a long-term financial plan to return to full-tuition undergraduate scholarships, while simultaneously maintaining the institution's financial well-being. Once approved by the Board of Trustees, these recommendations will serve as the cornerstone for future financial and strategic planning initiatives.

In this section of the Self-Study Report, a critical review of how the institution manages its primary resources—finances, personnel, infrastructure, and technology—was performed in order to confirm that The Cooper Union meets compliance with the following standard regarding planning, resources, and institutional improvement, as defined by the Middle States Commission on Higher Education (MSCHE):

“The institution’s planning processes, resources, and structures are aligned with each other and are sufficient to fulfill its mission and goals, to continuously assess and improve its programs and services, and to respond effectively to opportunities and challenges.”

FINANCES

The Cooper Union exercises control over its financial resources by means of an effective organizational structure, a comprehensive budget formulation and control process, and regular external audits.

Organizational Structure The Cooper Union clearly assigns responsibility and accountability for the management of its financial resources. The Board of Trustees assigns the primary duties of this responsibility to its Finance and Business Affairs Committee. The Committee meets quarterly, and their tasks include: reviewing financial reports, approving the annual budget (as well as amendments to it), approving tuition rates, approving all borrowings, and other financial-based decisions.

While the Cabinet and Business Office are ultimately responsible for the daily control of the institution's finances (individually accountable for the budgets of their departments), the Vice President for Finance and Administration bears the primary obligations related to this role. The Vice President for Finance and Administration assesses the financial aspects of all plans under consideration, and gives input to the Cabinet on the allocation of financial resources to support the institutional strategy. The Vice President for Finance and Administration is also responsible for providing financial and operational reporting, and for ensuring that adequate controls and procedures are in place to safeguard assets and produce reliable financial information. Each of the other Cabinet members is responsible for monitoring and controlling the financial activities of departments, which report to them, and is provided with real-time budget and financial transaction information through the institution's Enterprise Resource Planning (ERP) system, Ellucian Colleague. The Controller is trained in matters of internal control and risk management related to financial resources, and follows best practices (e.g., segregation of duties and review/approvals).

Budget Formulation and Control Process The institution's budget process is highly collaborative and aligned with the strategic planning and goal-setting process. Each summer, departments conduct strategic planning and assessment that is integrated into institutional planning and includes the development of budgetary elements (both operational and capital). Departments create annual plans, which are documented and communicated to the Cabinet.

In January, principal investigators are requested to submit preliminary personnel and departmental budget requests. When these requests are consolidated to form the corporate budget, the Cabinet mandates any cuts, reallocations, or additions that are needed in order to support macro-level, institutional priorities. The proposed corporate operating budget is then presented to the Board of Trustees for approval at their June meeting. For example, the FY2017-18 Budget was approved by the Trustees on June 21, 2017, and their approval was documented in the minutes from that meeting.

Principal investigators review budget variance reports for their departments and investigate any significant fluctuations or unknown items. The President, Vice President for Finance and Administration, and the Board Finance and Business Affairs Committee review quarterly consolidated budget variance reports for explanations of all material line-item fluctuations and evaluate the effectiveness of the institution's use of its financial resources to advance its mission and goals.

External Audits The Board of Trustees Audit Committee engages the external auditor, and the institution annually undergoes a “Uniform Guidance” audit of its financial statements. The external auditor reports the results of their examination to the Committee both orally and in the form of a management comment letter. The Committee ensures that management’s responsiveness to any control-related comments by the auditor is satisfactory. The institution has never received anything other than an unqualified opinion on its financial statements.

Financial Viability While the Cooper Union’s June 30, 2017 audited financial statements show that the institution’s past financial results have created challenges, its recently published “Plan to Return to Full-Tuition Scholarships” (January 15, 2018) shows that the institution has a sound, comprehensive plan to establish financial viability and generate the resources needed to continue carrying out its mission.

Past Financial Results For many years, the institution has run deficits, both GAAP and cash. The results of its five most recent years are shown below (amounts in millions):

Fiscal Year	GAAP losses (1)	Cash losses (2)
FY 13	\$13.9	\$11.1
FY 14	\$19.9	\$13.5
FY 15	\$24.5	\$15.0
FY 16	\$21.3	\$11.8
FY17	\$22.0	\$9.5
5-year cumulative	\$101.5	\$60.8

Figure 6.1 | Financial Losses

(1) From the audited financial statements, this GAAP loss is the Unrestricted “Deficiency of operating revenues under operating expenses before non-operating activities and other changes” from the Statement of Activities.

(2) From the audited financial statements, this Cash loss is the “Net cash used in operations” from the Statement of Cash Flows.

In 2014, The Cooper Union took a significant step to mitigate these losses. Until that year, the institution had provided full-tuition scholarships to all undergraduates; however, beginning with the undergraduate class that entered in the fall of 2014, The Cooper Union reduced the baseline undergraduate scholarship to a minimum of 50%. As a result, the institution has generated increasing amounts of net tuition revenue over the past four years as follows (in thousands):

	FY14	FY15	FY16	FY17
Net tuition and fees revenue	2,965	5,760	8,151	10,552

Figure 6.2 | Net Tuition and Fees Revenue

To address liquidity issues created by the recurring losses, the institution secured a 20-year, \$58.8 million “bridge” loan in 2014 with an annual interest rate of 4.60%. The institution is currently paying interest only on this loan, but will begin making principal payments in 2024. The loan also requires a \$39 million balloon payment in 2034.

The recurring losses over the years also depleted cash reserves and prevented the institution from funding its \$40 million liability for post-retirement medical benefits. As a result, the institution needs to generate positive operating results in the years going forward to replenish its reserves and fund the settlement of these aforementioned liabilities.

The Cooper Union has one additional financial complexity to manage. As described previously, the institution began providing less-than-100% tuition scholarships to undergraduate students starting with the class enrolling in September 2014. Based on an interpretation of the institution’s charter that it requires free tuition, a lawsuit was filed against Cooper Union seeking to force the institution to return to 100% tuition scholarships for all undergraduate students. The lawsuit was settled in December 2015 with a consent decree that required the Board and management to make a good-faith effort to develop a plan by January 2018 to return to a sustainable, full-tuition scholarship model. In accordance with the Consent Decree, the Board of Trustees established the “Free Education Committee” (FEC) to “examine whether Cooper Union can return to a sustainable, full-tuition scholarship model that maintains Cooper Union’s strong reputation for academic quality within its art, architecture and engineering programs at their historical levels of enrollment.” Also, as a result of the Consent Decree, the New York Attorney General appointed an independent financial monitor, Kroll Associates, Inc. (“Kroll”), who is “responsible for evaluating and reporting on the financial management of Cooper Union, including compliance with the Consent Decree.” The FEC and Kroll have produced the following reports, which shed additional light on The Cooper Union’s financial performance, challenges, and plans:

- Free Education Committee Issues Status Update—July 1, 2016
- Free Education Committee Progress Report January 15, 2017
- Annual Report of the Financial Monitor February 15, 2017

Future Financial Plan The Cooper Union's recently published "Plan to Return to Full-Tuition Scholarships" (dated January 15, 2018) shows that the institution has a comprehensive plan to establish financial viability and generate the resources needed to continue carrying out its mission.

The most notable feature of this future financial plan is the increase in the institution's annual lease revenue from its most substantial asset, the Chrysler Building, from around \$9.0 million to \$32.5 million, effective January 1, 2018. This increase is in accordance with the terms of a 148-year lease agreement in which the institution is the lessor. Beyond that, the institution has a reasonable plan to increase resources through expense cuts, increased fundraising, increased earned revenue, and special initiatives, as follows:

Revenue Initiatives:

- Reduce average graduate program scholarships to 25% beginning in FY19
- Increase dorm rate to current market rate, an average of \$15,000 beginning in FY20
- Grow building and facility rentals by 3% beginning in FY19
- Increase current-use fundraising by an average of \$1.2 million (or 25%) annually over the next five years and by an average of 11% annually for the next five years thereafter
- Increase annual ancillary revenue by \$250,000

Expense Initiatives:

- Realize additional annual operating expenses of \$1.2 million by FY20 through a combination of:
 - Reducing administrative rental costs at 30 Cooper Square
 - Reducing personnel expenses through increased operating efficiencies
 - Updating the benefits plan

Investments in Cooper Union's Future:

- Increasing annual capital improvement levels to address documented deficiencies, building to \$2.5 million by FY22
- Increasing annual investments in the academic program, building to \$3.0 million by FY25, if we meet the fundraising targets set forth in the plan
- Developing a reserve fund to repay the Bridge Loan in 2034

Revised Financial Assumptions:

- Increase expected annual growth on tax equivalency payments from 1% to 2% beginning in FY19, based on historical trends
- Reduce costs associated with severance, president's residence, and consent decree expenses that were budgeted excessively conservatively, beginning in FY19

PERSONNEL

Academic Staffing Among the procedures and factors determining the necessary number of employees at The Cooper Union are curricular needs, analysis of teaching loads, enrollment numbers, and safety considerations. In The Cooper Union's Schools of Art, Architecture, and Engineering, and in the Faculty of Humanities and Social Sciences, the numbers of faculty and staff have been largely driven by the requirements of their respective curricula. In general, new courses are approved by each school's curriculum committee. A new course is often proposed by the faculty member intending to teach it, but, if the subject is outside the expertise of the present faculty, the Dean may need to hire a new adjunct professor. Likewise, with staff in the Art School, for example, technicians are needed with varied expertise (such as casting, printmaking, metalwork, computer applications, etc.) to support curricular offerings and students' experimentation with new techniques. Past experience also plays a factor in determining the necessary faculty numbers. Often, quantitative analyses are performed to determine whether course enrollment numbers justify the frequency of some course offerings.

The Cooper Union has three categories of faculty:

- Full-time, teaching a load of 9 contact hours per week per semester, with health and fringe benefits
- Proportional-time, teaching 6 contact hours per week per semester, with health benefits
- Adjunct (part-time), usually teaching 2-6 contact hours per week per semester, without benefits (see Attachment 6.1.1 for breakdown of numbers of each type in each school).

Proportional-time positions have existed at The Cooper Union at least since 1985. Historically, the School of Engineering has never made use of proportional faculty and the School of Architecture is the only school that has ever had more than three at any given time. In the School of Architecture, multi-year proportional contracts with health benefits were intended to provide a few years' opportunity for a person to teach and simultaneously launch an architecture practice. However, until recently, almost all proportional contracts have been repeatedly (though intentionally) renewed, unintentionally creating another category of long-term faculty.

Under the current leadership of the Dean, the School of Architecture is undergoing redistribution in the numbers of full-time and proportional-time faculty. In the spring of 2016, the Dean of Architecture initiated a discussion among architecture students and faculty regarding the numbers of full-time, proportional-time, and adjunct faculty. At that time, the school had three full-time faculty members, 11 proportional-time faculty members, and 39 adjunct faculty members. The overwhelming consensus was that full-time faculty should be increased, in order to provide more continuity and availability of faculty to students not already covered by long-term proportional faculty. Under The Cooper Union's current financial situation, building the full-time faculty requires decreasing the numbers of proportional-time and adjunct faculty. At the same time, an examination of faculty loads revealed that some members of the proportional-time faculty were not being assigned a proportional teaching load.

In recognition of need to replace faculty, and following the decision by the Board of Trustees to begin charging tuition for FY 2015, the Board of Trustees authorized the hiring of ten new full-time faculty: two in the School of Engineering, three in the School of Art, two in Architecture, and three in Humanities and Social Sciences (HSS). The hiring of new full-time faculty members is a faculty-driven process in accordance with the existing CUFCT contract. Most of the new faculty have been successfully hired and began teaching in the 2016-17 academic year, except for those in Architecture, and one in HSS, where a search had to be reopened.

As new faculty hires were being made, The Cooper Union reached an agreement with The Cooper Union Federation of College Teachers (CUFCT), which represents full-time faculty and librarians, to offer a separation incentive that would encourage the retirement of up to 16 long-term faculty members and librarians over the next four years. Once the incentive payments are complete, this measure will save money and will provide new vigor to sustain the mission well into the 21st century.

Non-Academic Staffing Benchmarking against similar academic institutions is a starting point for determining the number of necessary staff members, particularly in non-academic areas such as Human Resources, Student Services, and the Business Office. Benchmarking was used by the Dean of Student Affairs to aid in reconfiguring that department, where increasing demand for mental health services, disability support services and immigration resource referrals have dramatically affected the workload over the past ten years. In addition to the long-standing services such as Career Development, coordinating student activities and managing the residence hall, Student Affairs now has a full-time therapist/counselor, with the title of Student Care Coordinator, and two part-time counselors, all licensed social workers, who meet with students both on-campus and nearby. The office now has a full-time Title IX Coordinator and Director of Student Diversity and Inclusion. It is important to note that the staffing level in Student Affairs was also determined by assessment of student needs and by legislative requirements (e.g., Title IX).

The Free Education Committee (FEC) compared data on The Cooper Union to a selection of other institutions, and found that The Cooper Union is often unique in regards to staffing and resources that such comparisons are often not useful. For example, in areas such as the Library, comparisons with similar-size institutions fail because none maintain a similar combination of specialized resources, which skews the Library's staffing and budget numbers. It was also noted that for institutional comparisons, some staffing requirements are not truly scalable. For example, in the Finance and Development offices, the same set of services must be performed no matter how small the school is, and that a similar number of staff would be needed if the school were twice as large.

Department managers' experience and staff perceptions also play a role in determining optimum numbers of staff. Redistribution of responsibilities within the department is one solution, as is a reorganization of tasks across departments. When the decision was made to charge tuition, for example, the "Bursar" position became more complex, incorporating additional billing, tuition payment plans, increased scholarship applications and funding, etc. Originally part of the Business Office, this function was moved to Financial Aid, under the aegis of the Vice President of Enrollment Services (formerly Dean of Admissions and Registrar).

Safety considerations also drive staffing needs. The School of Art, for example, has late night staff to ensure the safety of the students working in their studios and overseeing the students' general well-being and making sure that studio rules are adhered to. Members of the security force also make regular rounds of the buildings and deal with more general infractions.

Budget cuts are part of the plan to return The Cooper Union to financial stability. During the summer of 2016, each Dean or member of the President's Cabinet was asked to analyze expenses in their areas for possible savings, some of which were expected to come from employee layoffs. The President and the Board of Trustees relied on the Cabinet members to make informed decisions regarding the number and type of positions that could be eliminated.

Decisions were generally based on analysis of required tasks and redistribution of responsibilities. One third of the 15 positions eliminated were administrative—several of them individuals who had assisted previous administrators and officers. In the wake of the layoffs, further reassignment of tasks had to be accomplished. In general, it is understood by most employees that financial considerations will require lean operations for the foreseeable future.

This time of transition is an opportunity for The Cooper Union to evaluate each administrative area and assure that the structure and talent are aligned with the mission of the College and to support the evolving needs of faculty, student and staff with maximum efficiencies. The institution is presently evaluating each department. The new organization structures are providing new career opportunities and opportunities for advancement. In certain cases it is necessary to bring in new talent that expand the capabilities of the institution. It will be essential to hire people who want to clearly be at The Cooper Union and participate in the challenges of the coming years.

Staffing Evaluation The Cooper Union does not have a systematic procedure for the annual evaluation of employees or evaluation of their job satisfaction. As part of the reappointment process outlined in the CUFCT contract, assistant professors undergo annual reviews for reappointment prior to applying for tenure and promotion. The guidelines for reappointment, promotion and tenure of the full-time faculty are described in the CUFCT contract. However, other members of the institution, such as tenured faculty members, librarians, administrators, and staff are not uniformly subject to annual reviews. For those areas that do complete the reviews, usually an in-person extensive discussion of the employee's job performance is part of the review process. Besides providing information regarding job performance, this interaction presents an opportunity for a manager or senior administrator to gauge an employee's satisfaction and sense of fulfillment in their job.

Despite these potential complications, The Cooper Union's size works in its favor to promote interaction between managers and staff. The Human Resources staff encourages managers and department heads to touch base with their staff on a regular basis. Such personal contact allows managers to deal with problems as they arise, and to prevent small issues from growing into larger grievances.

There are parts of the institution with staff that work only weekends or evenings, requiring a special effort to evaluate those individuals' performances, and to assess their job satisfaction. In the School of Art, the Dean frequently interacts with everyone working in his school, and has managed to correct some "historic inequities" in rank and compensation, as well to ensure that each department had a head technician with responsibility for that area. In the School of Architecture, the Associate Dean has weekly meetings with the part-time staff that provide an opportunity to work out any difficulties, and to get a sense of the collective mood.

Currently, there is no mechanism for assessing the general state of employee morale, but there are procedures in place to deal with specific problems. Issues of harassment, discrimination, etc., are addressed promptly in the manner specified by The Cooper Union's Policy Against Discrimination, Harassment, Sexual Assault, Domestic Violence, Dating Violence, Sexual Exploitation and Stalking. Less flagrant issues brought by employees to the attention of the Human Resources office are addressed by Human Resources representatives and by the deans responsible for those areas.

A large proportion of employees at The Cooper Union are represented by a union (i.e., full-time faculty and librarians, part-time faculty, and full-time and part-time staff). These employees typically approach their union representatives should issues arise involving dissatisfaction with working conditions. Union representatives bring the issues to the Human Resources Office and/or the administration and work with them toward a resolution. Non-union employees would often go directly to Human Resources (or rarely, directly to the administration) with their grievances.

Administrators have noticed that mentorship of new employees can be an effective means to improve job satisfaction. Smaller institutions like The Cooper Union have limited opportunities for advancement, but as previously noted, the restructuring of departments is allowing employees to expand their skill sets and see greater opportunities than have previously existed for future advancement. Mentorship is perhaps more feasible for faculty, where there are a number of individuals at varying career stages who could act as mentors, and a succession of ranks to which one can advance. The Cooper Union's small size, however, means that there is not a similar path of advancement in most of the departments.

INFRASTRUCTURE

Current Policies The priorities of Buildings and Grounds are to provide a safe, energy-efficient, and legally compliant environment for the work of the students, faculty and staff of The Cooper Union. The task requires attention to routine recurring maintenance tasks, an understanding of major facility's needs, and a readiness to deal with emergencies.

Buildings and Grounds' building engineers make daily and monthly tours of Cooper Union's premises, to survey conditions, and to note any damage or developing problems. The Facilities Office maintains a schedule of routine and recurring tasks, such as the monthly inspections of fire extinguishers, annual painting of the Foundation Building lobby, or the weekly check for non-working lights.

Larger projects requested by academic deans or department heads, such as subdividing a classroom or painting the Library are prioritized by the facilities director and performed by the Buildings and Grounds staff. This type of work is considered part of the facilities management budget, and is not charged back to the requesting department unless the project has to be done speedily or requires outside expertise.

Large capital expenditures in the form of major maintenance and revitalization projects have been of particular concern and study over the last few years. A Facilities Condition Assessment Report and a campus wide space study were performed to better inform administration for planning and budgeting. The FEC utilized these reports in crafting their recommendations. These larger projects and their prioritization strategies can be broken down into two categories: "maintenance and upkeep of facilities" and "future plans."

Maintenance and Upkeep of Facilities In 2014, in order to provide guidance for prioritizing physical plant rehabilitation and major upgrades, the administration commissioned a survey and assessment of the institution's infrastructure by the ISES consulting firm. ISES representatives examined the four properties owned by The Cooper Union that comprise most of the campus: the Foundation Building, Residence Hall, Stuyvesant-Fish House, and 41 Cooper Square. Each building was inspected from roof to basement, including mechanical, electrical, and plumbing systems, structural components, elevators, utilities, and the immediate site within 5 feet surrounding the facility. Resource conservation opportunities and compliance with ADA Accessibility Guidelines were also evaluated. The resulting Facilities Condition Assessment report detailed the condition of each building and its equipment, and provides a schedule and cost estimates for recurring lifecycle maintenance and component replacement from 2014 through 2023.

Non-recurring renewal projects are expenditures beyond normal maintenance, and include alterations made to comply with changing codes (e.g., fire codes, accessibility), alterations required by changes in technology, program, or teaching methods, or repairs needed to correct deficiencies that affect building safety, usability, or aesthetics. The Facilities Condition Assessment report prioritized each of these projects as Immediate, Critical, or Non-Critical.

Among the immediate-priority projects completed since receiving the report in 2014 are elevator repairs, replacement of HVAC air handlers, and installation of new, properly fire-rated front doors (including an automatic door) in the Foundation Building, guardrail updates and wheelchair-accessibility modifications in the Residence Hall, and fire safety alterations to data closets, as well as corrections to the sewer and acid waste sump in the new building at 41 Cooper Square.

The full facilities assessment report included a recommendation that Cooper Union should be spending \$2.5 million per year for facilities “heavy maintenance,” such as the replacement of air handlers, boilers, roofs, etc. Currently, The Cooper Union spends approximately \$1.5 million per year for such capital improvements. As part of the annual budget process, The Cooper Union’s facilities management director and the Vice President of Finance and Administration annually review the list of priorities provided by the assessment report, and decide which projects to undertake.

Most recently, the January 2018 FEC report stated that the institution’s “Deferred Maintenance” has allowed depreciation to outpace the liquidation of debt. The report recommends the investment, cited above, of \$2.5 million per year in capital expenditures (versus the \$1.5 million currently being spent). The revitalization of the physical plant is seen as a fundamental piece of future planning and is expected to become an integral part of the forthcoming Strategic Plan.

Future Plans: Mandated and Voluntary A recently completed study of The Cooper Union’s space utilization and needs provides guidelines for modifications to campus buildings. The analysis by space planning consultants Page Southerland Page, Inc. assessed the current use of classrooms and other areas in The Cooper Union’s own campus buildings, as well as the leased floors at 30 Cooper Square, and made recommendations for adaptations and relocations to maximize efficient use of the premises

The study was carefully analyzed by the FEC, and some of its recommendations became recommendations in the final FEC report. Part of the “Expense Management Initiatives” outlined in the FEC report is to reduce Cooper Union’s rental footprint in 30 Cooper Square by at least half. As outlined in the report: *“This could be done through a combination of relocating people to space in the buildings Cooper Union owns (Foundation Building, 41 Cooper Square, and Residence Hall) and creating remote office options.”* Other space and cost saving possibilities are outlined as “bullpen” options within the FEC report.

Energy conservation is also a key stimulus for the rehabilitation and upgrade of The Cooper Union’s physical plant—not least because conservation of energy translates to dollar savings for the institution. The Cooper Union spends approximately \$1.7 Million per year for utilities—natural gas, water, steam, and electricity—for the Foundation Building, 41 Cooper Square, and the Residence Hall, so potential savings in this area would be attractive even without the carrot-and-stick incentives provided by New York City and New York State.

In 2009, the City of New York adopted a package of laws known as the “Greener, Greater Buildings Plan,” aiming to improve energy efficiency in large city buildings. Local Law 87 requires owners of buildings larger than 50,000 square feet to perform energy audits every ten years and to undertake retro-commissioning, which is the process of ensuring correct equipment installation and performance. The required Level 2 Energy Audit provides a facility owner with an analysis of the financial benefits of implementing specific energy efficiency measures. This type of audit must be done by licensed third-party specialists. Retro-commissioning requires that all equipment in the building has to operate the way it is designed to, and anything broken has to be fixed. The first of Cooper Union’s buildings to come due for an Energy Audit was the Residence Hall in 2015, and the Foundation Building in 2016. Items flagged as “Immediate” by the decennial Energy Audits automatically become top priorities, as the institution must submit documentation to the city to prove that the repairs are completed, and there are fines for non-compliance. Among the mandated repairs were the replacement of several water pumps, retuning of boilers, and the repair of a compressor, which led to the much more expensive replacement of a whole HVAC chiller.

Local Law 84, also part of the Greener, Greater Buildings plan, requires energy benchmarking, meaning that owners of buildings larger than 25,000 square feet must report their buildings’ energy usage to the City of New York on a yearly basis. A database of this information is available to participants, and provides valuable comparisons of building data and the effectiveness of conservation measures.

The Cooper Union also relies on the talents and knowledge of its faculty to help inform energy-based decisions. For example, a faculty member serves as the Facilities Energy Efficiency Advisor, and works closely with the Facilities Management Director to provide guidance regarding energy analysis and compliance for the institution, as well as to ensure the collection and analysis of energy data. The Cooper Union currently participates in the New York City Carbon Challenge, pledging to voluntarily reduce building-based emissions by 30 percent or more over the course of ten years. Students are engaged in the effort to improve the efficiency of building systems, to reduce carbon emissions and thereby lower energy expenses. In addition, student projects have resulted in several Master’s theses on topics including technical and economic assessment of the cogeneration system in 41 Cooper Square, laboratory ventilation energy conservation measures, and application of artificial intelligence to the Building Management System in 41 Cooper Square.

The Cooper Union is also enrolled in New York State’s REV Campus Challenge, a competition that challenges student-supported coalitions across the State to develop plans for new ways to advance clean energy on their campuses and in their local communities. The Cooper Union was recently designated a REV Challenge Achiever (categories are Leader, Achiever, Participant), which entitles the institution to apply to the New York State Energy Research and Development Authority for grants to fund some of the retro-commissioning work and energy audits required by the city.

TECHNOLOGY

Overview The Department of Information Technology, led by the Chief Technology Officer (CTO), supports the academic and administrative computing services campus wide. It is responsible for hardware and software procurement, instructional technology, and network connectivity both data and voice. It is a 24/7 service unit for the college.

Students have access to the public student computer laboratories and many small area labs. These labs include the Media Lab, the Architecture Computer Studio, and the Brooks Design Laboratory. In addition, many laboratories in the Engineering and Science Departments are heavily computerized. Hardware and software for these labs are provided and maintained by the Department of Information Technology or, in some cases, may be purchased directly by the three schools. Because of the highly technical nature of many of The Cooper Union's programs and the rapidly changing nature of technology, needs vary widely across the institution.

Individual desktop computers are provided for faculty and staff, with shared-drive access available to most part-time/adjunct faculty and staff. The renewal standard for computers is four years. Faculty and staff are also provided a telecommunications system with voicemail, conference calling, and call forwarding. Advanced features are available on a case-by-case basis. Access to the internet, email, and printing is made available via individual accounts. User support is provided primarily through the Department of Information Technology staff and student assistants. Technical staff members are also available in some individual departments.

The Library has a web-based online library catalog and participates in an integrated library system (ILS) through the Research Library Association of South Manhattan, which includes The Cooper Union, The New School, New York School of Interior Design, and New York University (NYU). System servers and maintenance for the ILS are handled by the NYU Libraries, and other servers for proxy software, restricted internal library databases, and other services for library personnel are maintained by The Cooper Union Library personnel.

Alignment with Academics The Department of Information Technology's main goal is to maintain a robust technology environment that supports instructional and administrative needs throughout the institution. It has a responsibility that broadly covers all means of communication on campus, all educational technology, and the development of policy governing the use of that technology. The department provides its services to students and faculty free of charge. In some cases, access to certain departmental facilities may incur a charge to offset costs (e.g., use of specialized printers).

The Department of Information Technology employs an automated "ticketing" system to track various technical problems and requests for services. However, the archived information generally does not aid in formulating technical solutions to new problems since most such problems are uniquely new, resulting from ever-advancing versions of hardware and software and addressed in a "just in time" paradigm. However, the system provides a mechanism for ensuring timely response to requests. It also can flag critical problems that arise.

Assessment Assessment procedures used by the department are both informal and formal in nature. Significant emphasis is given to communication between the CTO, senior staff and student workers, on the one hand, and the various academic and administrative Cooper Union personnel on the other. The Chief Technology Officer meets with key people such as the deans and faculty from each of schools to determine IT priorities. The CTO then makes best estimate of resources needs based on historical data for usage and new priorities.

About 60+ students are employed as technicians and consultants to the institution's faculty, staff and students, providing the department's management team the ability to quickly obtain feedback from student-users. There are about ten members on the professional staff team, three audio/visual staff and a few part-time staff with visual art backgrounds who serve as academic support staff for the School of Art. The department's senior staff is immersed in the academic process and is rapidly made aware of any deficiencies in the academic computing area. The CTO is currently also a member of the faculty of the School of Engineering, and many of the other staff members serve as adjunct professors, and advisers to students from all schools. The staff roles range from desktop support to managing the Art Studio and printers in the 41 Cooper Square. In the case of the administrative-user population, department maintains regular contact with key personnel from all areas of the institution.

Enterprise Resource Planning In 2007, an information technology committee was formed based on feedback from the PRR. The committee recommended the implementation of a single integrated system as the institution-wide academic and administrative system. The Cooper Union's administration interviewed a variety of vendors and eventually decided on Colleague by Datatel (now Colleague by Ellucian). The transition to Colleague occurred in 2012.

Grant Thornton As part of their yearly financial audit, Grant Thornton now performs a yearly technology audit. The purpose of this audit is to address specific technology or information security risks. This year, in November 2017, Grant Thornton made a number of specific information technology observations and recommendations for the previous fiscal year. The Cooper Union met with representatives from Grant Thornton, reviewed the findings, and discussed next steps for improvement. The Cooper Union reviewed the remaining items and agreed to plans to remediate outstanding items. These remediations are outlined in the management response to Grant Thornton that is in its final stages (at the time of writing this self-study report). This is a yearly cycle of assessment, recommendation, evaluation and response.

Strategic Assessment Additionally, in April 2017, Interra Consulting was contracted to perform a strategic assessment of key aspects of information technology at The Cooper Union. The assessment covered: strategy, organization, process and technology and detailed both findings (strengths and weaknesses) and recommendations. The recommendations from Interra were organized into a number of prioritized initiatives, which continue to be explored as critical needs to be addressed in the strategic planning process.

CHAPTER VII: GOVERNANCE, LEADERSHIP, AND ADMINISTRATION

INTRODUCTION

An institution's administration plays a vital role in ensuring that faculty, students, staff, and alumni have a valued sense of responsibility and commitment to the mission and vision of an institution. The university leadership, which at The Cooper Union consists of the President (who also serves as the Chief Academic Officer), Vice Presidents, Officers, Academic Deans, and the Dean of Students, guides how the institution strives in the higher education landscape, while simultaneously overseeing how the day-to-day operations are fulfilled. The President, working alongside the Board of Trustees and Officers, builds and carries out a strategic plan for the sustained excellence in all operations and aspects of the college.

Throughout The Cooper Union, different governance structures and representative bodies exist, which allow members of the community to take an active role in the advancement of the institution. Examples of these include the Board of Trustees, the Faculty-Student Senate, and other academic and administrative councils and committees that have been mentioned previously in this report. While there are differing academic governance structures and diverse representative bodies across the institution, there is an overarching culture of purpose, which results in all members of the community taking an active role in the advancement of the institution. The small size of the college allows for less stratification and more civil and productive communication.

In this section of the Self-Study Report, a critical review of the institution's leadership, administrative structure, governance policies, and similar representative bodies was performed in order to confirm that The Cooper Union meets compliance with the following standard regarding the governance, leadership, and administration, as defined by the Middle States Commission on Higher Education (MSCHE):

"The institution is governed and administered in a manner that allows it to realize its stated mission and goals in a way that effectively benefits the institution, its students, and the other constituencies it serves. Even when supported by or affiliated with governmental, corporate, religious, educational system, or other unaccredited organizations, the institution has education as its primary purpose, and it operates as an academic institution with appropriate autonomy."

GOVERNANCE

The Cooper Union for the Advancement of Science and Art operates under the concept of Shared Governance, which is defined by the Association of American University Professors (AAUP) as *“In some instances an initial exploration of recommendation will be made by the President with the consideration of the Faculty at a later stage; in other instances a first and definitive recommendation will be made by the Faculty subject to the endorsement of the president and then the governing board. In still others substantive contributions can be made when student leaders are responsibly involved in the process.”* In the separate governances for the Schools of Architecture, Art, Engineering, and the Faculty of Humanities and Social Sciences, the composition of the voting base is inclusive of all full-time faculty members.

The voting membership on standing committees consists of the full-time faculty, proportional faculty, adjunct faculty, elected representatives, and in some cases, the elected student representatives. Members of the Administration, the Dean, the Dean of Students, the Vice President for Enrollment Services, and the President are ex-officio members to all Faculties. In order to provide additional insight across the institution, members of the Faculty of Humanities and Social Sciences have reciprocal ex-officio membership on many of the committees in the School of Architecture, School of Art, and School of Engineering.

Changes to the specific school governances must be voted on by the faculty at a full faculty meeting and then are forwarded to the Dean and the President who endorse the changes and puts them forth on the agenda for the Board of Trustees meeting. The Board of Trustees has final approval regarding any changes to school governances.

THE BOARD OF TRUSTEES

The definition and responsibilities of the Board of Trustees are outlined in the revised by-laws, which were adopted on November 11, 2015. These revisions were made in response to the Consent Decree. The composition of the Board of Trustees, as dictated by the Consent Decree, became more inclusive, transparent, and renewed its profile as part of the essential fabric of the Cooper Union community as a whole. The revisions to the by-laws were as follows:

1. The Chair or a Vice Chair of the Board of Trustees shall always be an elected alumni trustee. (Sec 3.01)
2. There will be two Student Trustees on the Board going forward (Sec 1.03.2). These Student Trustees shall have the same rights and responsibilities as other members of the Board except they shall not be permitted to attend executive sessions of the Board where their attendance would present an actual or potential conflict of interest, including sessions that relate to academic governance matters or employment and personnel matters.

3. Elected alumni trustees shall comprise one-third of the Board (Sec 1.03.1) Alumni Trustees...shall be alumni of the Corporation who are nominated as candidates for the Board membership by the Cooper Union Alumni Association, subject to the further restrictions that no fewer than five and no more than nine members shall be Alumni Trustees.
4. The President is no longer a member of the Board of Trustees.
5. The positions of Representative (Observers and Advisors) were created to promote more transparency in accordance with the Consent Decree. (Sec 1.14.1-1.14.4) Four full-time faculty members elected from each of the Faculties, one part-time (adjunct faculty member) elected by the part-time faculty and one staff member elected by the staff to serve as staff representative. Representatives shall be entitled to attend all meetings of the full Board and committees except that they shall not be entitled to attend executive sessions of the Board and meetings or portions of meetings of the Board or a committee where doing so would present an actual or potential conflict of interest or where the subject of the meeting is confidential. Representatives shall be entitled to receive any information or documents distributed to the Board that are designated as privileged, private or confidential. Representatives may provide advice or information when solicited by the Board.

Free Education Committee The Free Education Committee was created by a resolution of the Board of Trustees adopted on November 11, 2015. The Free Education Committee has been focused on developing a strategic plan to return to free-tuition scholarships for undergraduates. This will be a critical part of the overall strategic plan, which is overseen by the full Board of Trustees. The President's role will be to work with the Board of Trustees and The Cooper Union community (faculty, students, staff and alumni) to identify opportunities and challenges and to recommend strategic directions/areas of focus based on the institutional mission, its strengths and weaknesses and opportunities.

Representatives to the Board of Trustees The Representatives envisioned their purpose as being a source of information to which the Board would generally not be privy. They would also serve as a direct conduit of information and ideas based in their expertise in the day-to-day academic workings of the institution. Initially, their involvement with the Board of Trustees was fairly passive in nature. However, the interaction of the Representatives with the Board has markedly improved with the arrival of the new President who has made it a point to seek and consider the observations of the Representatives. This has greatly increased the connectivity of the Board of Trustees with the needs and characteristics of the three degree-granting academic schools.

PRESIDENT LAURA SPARKS

The Cooper Union's President, Laura Sparks, arrived in January 2017 at a seminal moment for the institution. Her successful candidacy was the result of the deliberations of a Presidential Search Committee that represented all the advocacies that come to bear on The Cooper Union, its mission and its future. The committee included the Chair of the Board of the Trustees, the Chair of the Governance Committee, two full-time faculty members who were self-nominated and approved by the Board of Trustees, one elected alumni trustee, one member of the adjunct faculty (also an alum) and a representative (an alum and faculty member) who brought the lawsuit against the institution in the wake of charging tuition. This committee was effective in that all parties understood the social and historical importance of the institution and therefore was united in its desire to both protect the social and philanthropic legacy while ensuring the ongoing mission for the future of The Cooper Union.

ACADEMIC AND ADMINISTRATIVE COUNCILS

The President maintains three ongoing Councils to keep her informed and to assist in the overall management of the institution. The Councils are:

- The Academic Leadership Team—this is chaired by the President and is comprised of the Deans of the Schools of Architecture, Art, and Engineering, Dean of the Faculty of Humanities and Social Sciences, Dean of Students
- Cabinet—this is chaired by the President and includes Vice Presidents, Academic Deans, and other key administrative Directors
- The Management Council—this is chaired by the Vice President of Finance and Administration

These internal academic and administrative advisory councils will be supplemented with a series of new councils. The President is committed to the value of establishing school focused internal and external councils as an enrichment and important advisory tool for the institution's evaluation of the effectiveness of its policies both within the academy and the world at large. The plan is to consider setting up Dean's circles that are specific to the schools, as well as external councils both school-specific and institution-wide, that will assess the effectiveness of the policies and their implementation in attaining the mission and goals as set forward in the strategic plan.

ORGANIZATIONAL RESTRUCTURING AND EFFECTIVENESS

The review of the existing organizational structure is currently in development as the new President, Laura Sparks, assesses the needs and the efficiencies that will best serve the mission and goals of the institution. The President's Office, Human Resources department, Business Office, and the Office of Student Affairs have undergone a restructuring to promote a more accessible administrative organization. One goal is to have a clearer documented sense of accountability and job performance within the administration as a whole. Another goal is to ensure that Human Resources and the Business Office are service-oriented and supportive of faculty and staff while also ensuring operational efficiencies and appropriate policies and procedures. The ongoing employment criteria will include a clear understanding of the mission of the institution and its importance to the academic strength and future of the three schools. Presently under the guidance of a new Interim Director of Organizational Effectiveness & Talent Management, a new system of consistency and clarity in administrative job descriptions, annual report, and a clear line of accountability and oversight of work product is being devised and implemented.

New Leadership Positions The President's Office is currently taking the opportunity due to some vacant leadership positions to create a more streamlined leadership team. This reorganization will help shape Cooper Union through this next period of growth and change. The new members leadership team include:

- Director of Strategic Initiatives and Institutional Effectiveness—this director will oversee strategic planning and some of the ongoing assessment work on campus. The position will also include internal engagement and evidence based evaluation of programs.
- Director of Organizational Effectiveness and Talent Management—this director will reorganize and restructure the Human Resources department, as well as act as President's designee for negotiations with the three bargaining units.
- Governance and External Affairs Officer—this officer will be responsible for providing strategy and leadership regarding external affairs, internal governance, and compliance for The Cooper Union. This officer will also act as the Secretary to the Board of Trustees.

At the moment, there are still two key positions to be filled: a Director of Communications and Public Programs, and a Vice President of Alumni Affairs and Development. These positions will participate on the President's leadership team.

THE FACULTY-STUDENT SENATE

The Faculty Student Senate at The Cooper Union is a unique and effective stage for substantive discussions engaging several constituencies simultaneously. It is a representative body, whose purpose is to advise the President and the Board of Trustees and update the faculty and students on issues pertaining to the college's mission, its use of resources, and its academic planning and development. The voting membership consists of two students from each of the three Schools, two full-time faculty from each of the three schools and the Faculty of Humanities and Social Sciences. The ex-officio members include adjunct faculty members and union representation.

The Faculty-Student Senate offers the unique opportunity for dialogue amongst the Faculty, Administration and Students and has been effective in resolving issues that span the entire campus. Two examples of its value and effectiveness are noted by meetings in 2013 and 2014 that (1) led to rescinding inappropriate and uncirculated revisions to the (Student) Code of Conduct by the Administration and (2) provided the entire community with an introduction to Title IX. The Faculty-Student Senate has also passed resolutions making recommendations regarding Presidential leadership.

More recently, concerns that were presented for discussion at the Faculty-Student Senate centering on diversity and inclusion in the School of Engineering, led to the formation of an institution-wide Diversity & Inclusion Task Force. The goals and composition of this Task Force have been discussed previously in this report (Chapter 2).

The Faculty-Student Senate is also effective in serving in its advisory capacity by enforcing the protocol contained in its by-laws, and stipulating four required quarterly meetings with Chair of the Board of Trustees and the Chair of the Board of Trustees Committee on Academic and Student Affairs. The Faculty Student Senate is potentially one of the most important governance bodies on campus that is uniquely poised to address critical issues across the institution.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The primary goal of the Self-Study was to identify how The Cooper Union meets compliance with the Middle States Commission on Higher Education Standards of Accreditation and Requirements of Affiliation. As described in the seven chapters of the Self-Study Report, there is substantial evidence that indicates that, despite recent transformational events, The Cooper Union continues to maintain compliance with the Middle States Standards of Excellence. Another goal of the Self-Study was to provide an introspective analysis of all aspects of the institution, in order to inform future Strategic Planning efforts. A key part of this process was the development of recommendations based on a critical review and analysis of the report's findings.

RECOMMENDATIONS

The Steering Committee, with input from the Working Groups and the institutional community, developed a list of broad recommendations. Since some of the recommendations transcend multiple Standards of Accreditation, the recommendations are listed here, at the end of the Self-Study Report, rather than at the end of each chapter. The following are the list of recommendations:

1. Strategic and Financial Planning It is recommended that current and future strategic planning efforts should be focused and prioritized in order to support the updated vision and mission statements. Suggestions from the Free Education Committee, the independent Financial Monitor, and institutional community (e.g., Faculty-Student Senate, Diversity Task Force) should be considered to help inform future strategic and financial planning efforts. All planning efforts should be continuously assessed.

2. Institutional Learning Goals and Assessment It is recommended that the institution develop new Institutional Learning Goals that support the updated vision and mission statements. If necessary, new assessment methods that inform the extent by which the Institutional Learning Goals are met should be developed. Should elements of the new Institutional Learning Goals be interdisciplinary in nature, it is suggested that new interdisciplinary academic structures (e.g., curriculum, faculty, administrative committees) be simultaneously developed to promote academic dialogues across the institution.

3. Student and Alumni Success It is recommended that communications between the academic and non-academic sides of the institution be strengthened in order to ensure student and alumni success. It is suggested that the:

- a. Office of Admissions and the three Schools work together to develop processes by which prospective and incoming student data is properly used to identify necessary academic support in order to improve the coherence of entering classes.
- b. Office of Student Services and the three Schools work together to promote a positive and inclusive campus climate that promotes student learning, focuses on students' wellbeing, and is guided by proper assessment and advising to monitor student success.
- c. Office of Alumni Affairs and the three Schools work together to promote and track the career achievements of alumni and to publish those successes in institutional communications.

4. Institutional Policies and Governance It is recommended that the institution transparently publish and, wherever necessary, develop, all policies, procedures, governances, and other similar documents that govern the operations of all academic and non-academic departments, schools, offices, and other institutional bodies and structures. This suggestion should lead to improved communications, adherence to policies, and a culture of shared governance, responsibility, and accountability throughout the institution.

5. Human Resources: Policies and Procedures It is recommended that the Human Resources office undertake a process by which all workplace-related policies and procedures for all members of the institution are developed, communicated, and published in a transparent and consistent manner that is governed by ethics and integrity. Examples of these workplace-related policies and procedures include, but are not limited to: published job descriptions, employee handbooks and code of conducts, procedures for employee reviews and evaluations, disciplinary procedures and associated appeals processes, guidelines to promote workplace effectiveness and accountability, opportunities for professional development, and policies that support intellectual property and academic freedom.

6. Institutional Data and Assessment It is recommended that the institution develop a process, which is supported by a strategically organized information technology structure and systematically evaluated using an associated assessment plan, to improve the acquisition, usage, management, governance, and reporting of institutional data.

APPENDIX I: WORKING GROUP MEMBERS

WORKING GROUP ONE: MISSION AND GOALS

Sam Keene, *chair* | Associate Professor of Electrical Engineering

Julie Castelluzzo, Librarian

Toby Cumberbatch, Professor of Electrical Engineering

David Gersten AR'91, Professor of Architecture (Proportional)

Owen Law, Student, School of Art

WORKING GROUP TWO: ETHICS AND INTEGRITY

Claire Gunning, *chair* | Librarian

Mindy Lang A'82, Creative Director, Office of Communications

Victoria Heinz ChE'06, Technician, School of Engineering

Lawrence Mesich, Academic Support Specialist

WORKING GROUP THREE: DESIGN AND DELIVERY OF THE STUDENT LEARNING EXPERIENCE

Christine Osinski, *chair* | Professor of Art

Melody Baglione, Chair and Associate Professor of Mechanical Engineering

Daniel Galperin, Student, School of Engineering

Kit Nicholls, Director, The Center for Writing

Elizabeth O'Donnell AR'83, Associate Dean, School of Architecture

WORKING GROUP FOUR: SUPPORT OF THE STUDENT LEARNING EXPERIENCE

Cara Di Edwardo A'85, *chair* | Printmaking Technician and Adjunct Professor, School of Art

Adrienne Greth, Associate Director of Admissions

Pranav Joneja, Student, School of Engineering

Brian Murrell, Assistant Registrar

Jolie Woodson, Director of Engineering Career Development and Outreach

Charlie Xu, Director of Financial Aid

WORKING GROUP FIVE: EDUCATIONAL EFFECTIVENESS ASSESSMENT

Benjamin Davis, *chair* | Associate Professor of Chemical Engineering

Steven Hillyer AR'90, Director of the Architecture Archive

Alexander Tochilovsky A'90, Director of the Lubalin Center

Phil Yecko, Associate Professor of Physics

WORKING GROUP SIX: PLANNING, RESOURCES, AND INSTITUTIONAL IMPROVEMENT

Yash Risbud EE'92/'94, *chair* (through December 2017) | C.V. Starr Research Foundation

Keith Stokeld, *chair* (starting January 2018) | Controller

Robert Hopkins, Chief Technology Officer

Anita Raja, Associate Dean of Research and Graduate Programs, School of Engineering

Carol Salomon, Director, Cooper Union Library

Steve Gleimer, Budget Director

WORKING GROUP SEVEN: GOVERNANCE, LEADERSHIP, AND ADMINISTRATION

Day Gleeson, *chair* | Associate Professor of Art

Atina Grossmann, Professor of History, Faculty of Humanities and Social Sciences

William Mea, Vice President for Finance and Administration (through Summer 2017)

Robert Topper, Professor of Chemistry, School of Engineering

APPENDIX II: BOARD OF TRUSTEES

CHAIRS & VICE CHAIRS

Rachel L. Warren, Chair

Stephen Gerard ME'67, Vice Chair

Eric Hirschhorn ME'89, Vice Chair

TRUSTEES

Kevin Burke EE'72

Anne Chao (Elected December 2017)

Joseph B. Dobronyi Jr.

Thomas Driscoll ME'77

Wanda Felton (Elected December 2017)

Peter Katz A'76

Malcolm King EE'97

Lynn Lander ChE'60 (Joining March 2018)

Scott Lerman A'81

Mary Dwyer ME'19

Julian Mayfield A'18

Paul Nikulin CE'06

Kevin Slavin A'95

Brian Steinwurtzel

Robert Tan AR'81

Jeremy Wertheimer EE'82

REPRESENTATIVES TO THE BOARD

Toby Cumberbatch | Full-time Faculty

Atina Grossmann | Full-time Faculty

Yuri Masnyj A'98 | Part-time Faculty

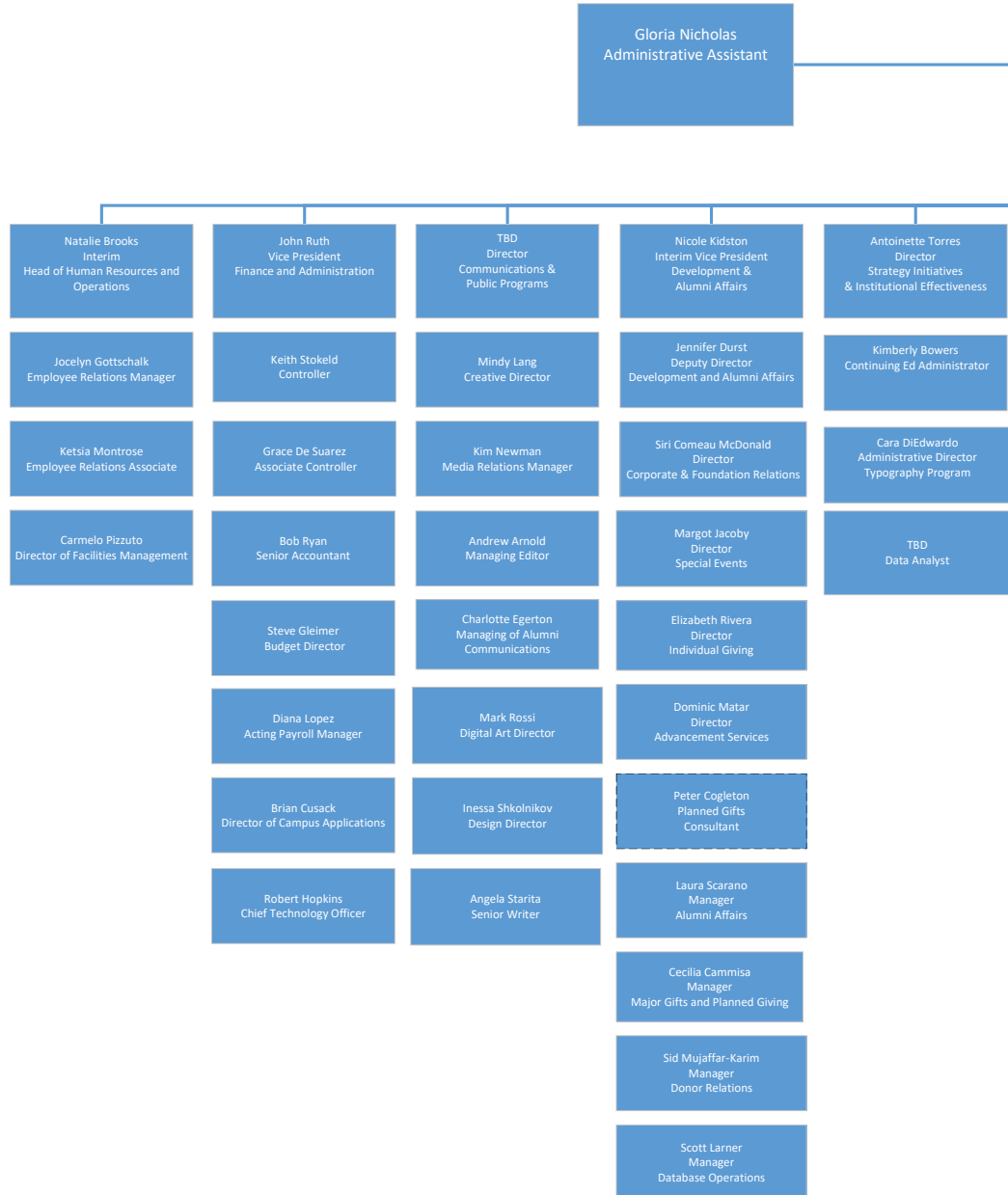
Walid Raad | Full-time Faculty

Amy Westpfahl A'00 | Staff

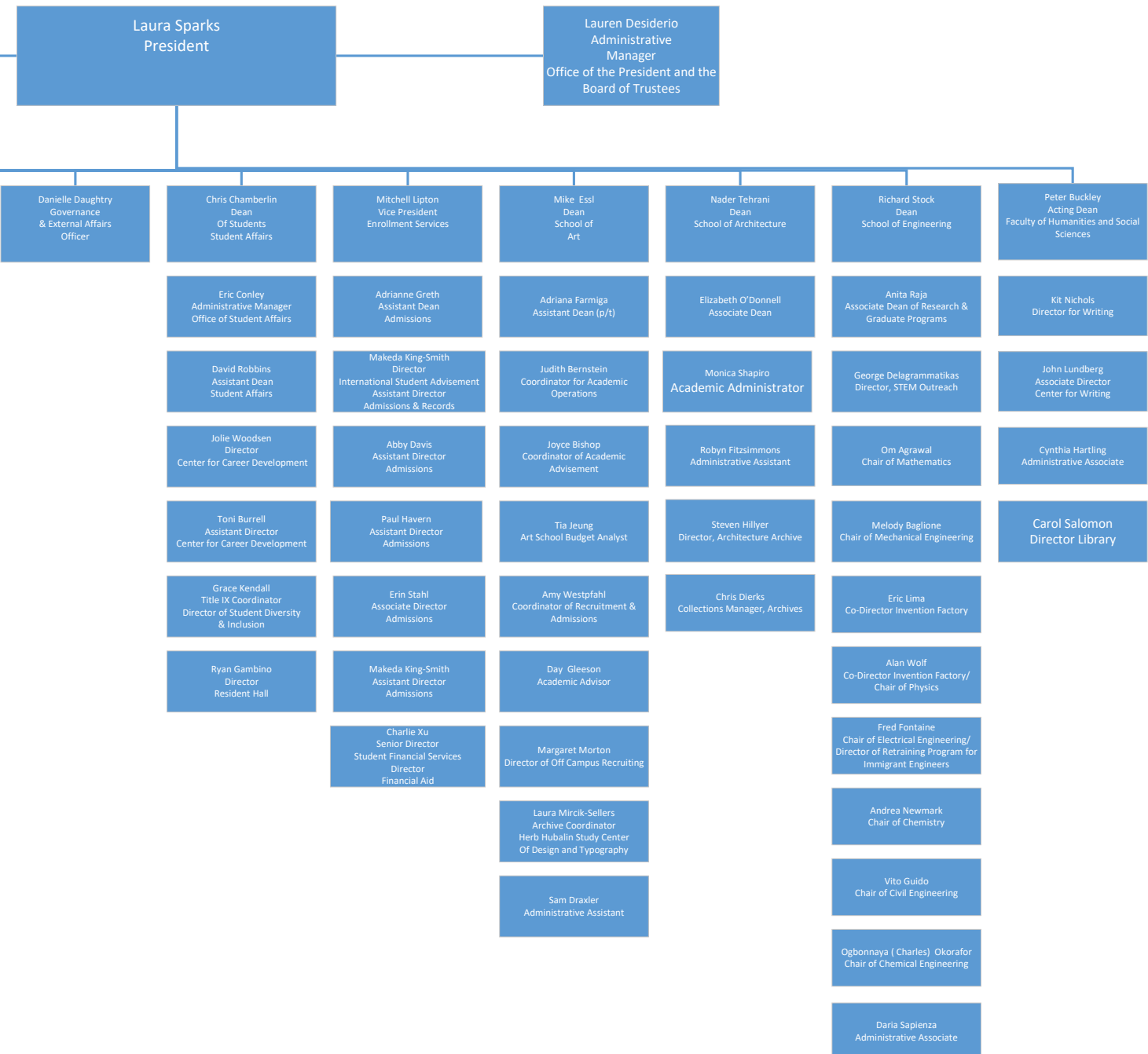
POLICIES, COMMITTEES, STATEMENTS, REPORTS AND MINUTES CAN BE FOUND:

<http://cooper.edu/about/trustees>

APPENDIX III:



ORGANIZATIONAL CHART



APPENDIX IV: OFFICERS

Laura Sparks, President

Peter Buckley, Acting Dean, Faculty of Humanities and Social Sciences

Christopher Chamberlin, Dean of Students

Danielle Cooper Daughtry, Governance and External Affairs Officer

Mike Essl A'96, Dean, School of Art

Mitchell Lipton, Vice President of Enrollment Services and Dean of Admissions

John Ruth, Vice President, Finance & Administration

Richard Stock, Dean, Albert Nerken School of Engineering

Nader Tehrani, Dean, The Irwin S. Chanin School of Architecture

An organization chart can be found in the Appendix and on the resource website.

Contact information for all Cooper Union personnel can be found: <http://cooper.edu/people>

APPENDIX V: DOCUMENT ROADMAP

MIDDLE STATES RELATED DOCUMENTS

Eligibility Certification Statement

Verification of Compliance with Accreditation-Relevant Federal Regulations

2013 Periodic Review Report

PREAMBLE

Mission Statements

Consent Decree and Related Documents

FEC's Recommended Plan to Return to Full-Tuition Scholarships (January 15, 2018)

Free Education Committee Progress Report (January 15, 2017)

The Cooper Union's Board of Trustees' Response to the FEC Report (March 7, 2017)

Free Education Committee Issues Status Update (July 1, 2016)

A Message on Behalf of the Free Education Committee (January 15, 2016)

Annual Report of the Financial Monitor (February 15, 2018)

Annual Report of the Financial Monitor (February 15, 2017)

Financial Aid Website

CHAPTER I: MISSION AND VISION

Email Announcements

Mission Statements History Documentation

Consent Decree and Related Documents

Recommended Plan to Return to Full-Tuition Scholarships (January 15, 2018)

Free Education Committee Progress Report (January 15, 2017)

The Cooper Union's Board of Trustees' Response to the FEC Report (March 7, 2017)

Free Education Committee Issues Status Update (July 1, 2016)

A Message on Behalf of the Free Education Committee (January 15, 2016)

Annual Report of the Financial Monitor (February 15, 2018)

Annual Report of the Financial Monitor (February 15, 2017)

Financial Aid Website

CHAPTER II: ETHICS AND INTEGRITY

Conflict of Interest Policy

Student Code of Conduct

Contracts

- UCU
- CUOP
- CUFCT

Financial Aid Website

Consent Decree and Related Documents

Recommended Plan to Return to Full-Tuition Scholarships (January 15, 2018)

Diversity and Inclusion Taskforce Materials

CHAPTER III: DESIGN AND DELIVERY OF THE STUDENT LEARNING EXPERIENCE

Website descriptions of undergraduate and graduate programs

Program and school specific accreditation and self-study documents:

- NAAB for The School of Architecture
- NASAD for The School of Art
- ABET for The School of Architecture

The Governances of the four faculties outlining the standing committees

- List of Architecture Faculty on Standing Committees
- List of Art Faculty on Standing Committees
- List of Engineering Faculty on Standing Committees
- List of Humanities and Social Sciences Faculty on Standing Committees
- Fall 2014 School of Architecture List of Faculty Members and summary of expertise

Contracts

- UCU
- CUOP
- CUFCT

Cooper Union Website

- Samples of Design Team Projects from the Office of Communications
- The Cooper Union E-Newsletters
- Design Team Projects List from September 2014 To September 2015

Credit Audit Forms

The Cooper Union Center for Writing MSCHE Unit Assessment Report (Spring 2015)

Registration and Course Materials

- Course Catalogs
- Course Schedules
- List of Courses Open to All Students

Expanded Educational Opportunities

- Menschel Fellowship Application
- Menschel Fellowship Catalogs
- School of Art Exchange Recommendation Form
- School of Art Exchange Evaluation Form

Curriculum Committee Minutes

Emails

CHAPTER IV: SUPPORT OF THE STUDENT LEARNING EXPERIENCE

Communication Plan Timeline 2017

Communication Plan Fall 2016

Accepted Students by School Analysis

Architecture Open House Feedback Form

Engineering Preview Day Feedback Form

Architecture Studio Test Documents

Art Hometest Documents

Admissions Summaries 2014-2017

Enrollment Summaries 2014-2017

Governances

 The Irwin S. Chanin School of Architecture

 School of Art

 Albert Nerken School of Engineering

 Faculty of Humanities and Social Sciences

Non-Applicant Survey Analysis

Part II Writing Supplement 2017

CHAPTER V: EDUCATIONAL EFFECTIVENESS ASSESSMENT

Architecture Assessment for Middle States 2014

ABET Criteria

Art Curriculum Committee Summary 2008

Faculty Meeting Minutes

IR & Assessment Studies, Reports and Surveys as of February 2017

Summary Table COA

2013 Periodic Review Report

Unit Assessment Reports 2013-2015

Unit Assessment Reports 2011-2013

Websites

- School of Art
- The Irwin S. Chanin School of Architecture
- Albert Nerken School of Engineering

Social Media: @cooperunion, @thecooperunion
 School of Art Exhibition Materials
 Course Catalogs
 School Syllabi
 Admissions Documents
 Irwin S. Chanin School of Architecture NAAB Exit 2014
 Senior Exit Surveys and Statistical Analysis
 Alumni Surveys
 School of Architecture Curriculum Matrix

CHAPTER VI: PLANNING, RESOURCES AND INSTITUTIONAL IMPROVEMENT

Consent Decree and Related Documents
 FEC's Recommended Plan to Return to Full-Tuition Scholarships (January 15, 2018)
 Free Education Committee Progress Report (January 15, 2017)
 The Cooper Union's Board of Trustees' Response to the FEC Report (March 7, 2017)
 Free Education Committee Issues Status Update (July 1, 2016)
 A Message on Behalf of the Free Education Committee (January 15, 2016)
 Annual Report of the Financial Monitor (February 15, 2018)
 Annual Report of the Financial Monitor (February 15, 2017)
 Space Planning Study
 Audited Financial Statements
 Management Responses
 Interra Consulting Information Technology Assessment
 Institutional Organization Chart
 Finance and Business Office Committee Charter
 Cabinet Organizational Chart
 2017-2018 Departmental Annual Plans
 Minutes of the June 21, 2017 Board Meeting

CHAPTER VII: GOVERNANCE, LEADERSHIP, AND ADMINISTRATION

Governances

- The Irwin S. Chanin School of Architecture
- School of Art
- Albert Nerken School of Engineering
- Faculty of Humanities and Social Sciences

Contracts

- UCU
- CUOP
- CUFCT

By-Laws and Mission statement of the Faculty Student senate

By-Laws of Board of Trustees

Minutes from Board of Trustees meetings

Mission for Board of Trustees committees

Reflections documents

Timeline

The Cooper Union's Board of Trustees' Response to the FEC Report (March 7, 2017)