

# **ARCHITECTURE** **PROGRAM REPORT**

FOR THE NATIONAL ARCHITECTURAL ACCREDITATION BOARD

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THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE  
THE COOPER UNION FOR THE ADVANCEMENT OF SCIENCE AND ART

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# 1. INTRODUCTION TO THE PROGRAM

*The Cooper Union for the Advancement of Science and Art is a private college that occupies a singular place in America's educational and social landscape. The Cooper Union's graduates, with a rigorous education in architecture, art or engineering, become visionary thinkers, creators and innovators who change the world in the service of humankind.*

*All admitted students receive a full tuition scholarship.*

## 1.1 History and description of the institution

(Partly excerpted from the institutional self-study "Sustaining the Mission", prepared for the Middle States Commission on Higher Education decennial review, April 2008.)

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. Dedicated exclusively to preparing students for the professions of architecture, art and engineering, the college has an enrollment of approximately 1,000 students, all accepted on merit alone.

Through the Charter and Deed of Trust, Peter Cooper, inventor, industrialist, philanthropist, and public servant, endowed a newly established institution, The Cooper Union for the Advancement of Science and Art, a building and land "for the purpose of establishing a public institution ...for the advancement of science, art, philosophy and letters, for procuring and maintaining scientific and historical collections, collections of chemical and philosophical apparatus, mechanical and artistic models, books, drawings, pictures and statues, and for cultivating other means of instruction." Thus Peter Cooper endowed a public building, not a particular program. The original Foundation Building housed a large public lecture hall, classrooms, galleries and a free reading room.

The Deed of Trust of the new institution specified five goals in support of its general mission: 1. Providing free night courses on applied science, social and political sciences and other branches of knowledge; 2. Creating a free reading room, art galleries and scientific collections; 3. Providing instruction for women in the arts of design; 4. Establishing a polytechnic school; and 5. Organizing a society to be called The Associates of The Cooper Union for the Advancement of Science and Art.

It is possible to see within these five original programs the seeds of The Cooper Union's current structure: professional schools of Architecture, Art and Engineering with outreach programs for high school students and continuing education and other public programs.

In 1859, college education in the United States was still elitist and religious. The Cooper Union was the first private institution of higher education in the nation to admit students based exclusively on merit; the first to explicitly prohibit discrimination based on race, gender, religion, ethnicity or national origin; the first to provide a free education to every admitted student (before free public education at the pre-college level was public policy); and the first to offer a free reading room open to all residents of the city, the forerunner of the public library.

The Charter placed an emphasis on “practical” education, to extend and develop contemporary knowledge in a democratic fashion; not to teach trade or craft skills. The aim of a truly practical education was not employment but rather independence and innovation in thought. Having grown up as a radical artisan, Peter Cooper had a personal horror of indebtedness, dependency and private patronage. Cooper believed that competence and independence assured both political stability and material progress.

By 1907 the school had grown to over two-and-a-half thousand students (with 3000 on the waiting list), taking full-time and night courses in general science, chemistry, electricity, civil, mechanical, electrical engineering, art, stenography, typewriting, telegraphy, elocution, oratory, and debate. In response to changing contexts of education and the work force, a new phrase of the institution gradually came to the fore: the training of professionals. This education would still be as “free as air and water,” and the working classes and immigrants would remain its primary beneficiaries.

The Cooper Union determined to remain a full-scholarship college and has become one of the most highly selective educational institutions in the country. The notion of democratic access was encapsulated in its “need blind,” full-scholarship admissions policy. Practical learning is now emphasized in the unique combination of programs in architecture, art and engineering. Civic improvement is to be found in its public and outreach programs and in its continued concern to train ethically vigilant students within the disciplines.

The Great Hall of The Cooper Union, located on the lower level of the Foundation Building, was designed to accommodate a standing audience of 3,000. From its opening in 1858, The Great Hall became a center of civic engagement for the community outside of the institution, providing a space for free public lectures, a forum for public debate and a platform for some of the most significant issues of the time. In 1859 no social issue was more important than that of slavery, and Cooper Union quickly became a center of abolitionist activity. On December 15, 1859, anti-slavery leaders Wendell Phillips and George Cheever came to the Great Hall for a ceremony honoring the memory of John Brown, who had been hanged just two weeks earlier for his raid on Harper’s Ferry. It established an immediate tone of radicalism and democratic action in the Hall.

On February 27, 1860, Abraham Lincoln delivered his historic “Right Makes Might” speech in The Great Hall. In addition to Phillips, Cheever and Lincoln, Frederick Douglass also rallied abolitionists here, and it was here that Douglass celebrated Lincoln’s Emancipation Proclamation.

The Cooper Union went on to become home to a number of other important social movements of the 19th and 20th centuries. It was headquarters for Susan B. Anthony, Victoria Woodhull, Elizabeth Stanton and the women’s suffrage movement. Housing reform and the New York tenement house law were hammered out in The Great Hall. The American Red Cross was born here. Labor unions were formed in the Great Hall where, in 1877, they gathered to bring the nation’s railroads to a halt. In 1909, young female shirtwaist workers launched the “uprising of the twenty thousand,” which began the enormous struggle to improve working conditions in the city’s garment industry. In 1910 the National Association for the Advancement for Colored People held its first open meeting in The Great Hall, where, in the years that followed, W. E. B. DuBois challenged the nation to live up to its promise of freedom for all. The Great Hall has provided a forum for American presidents since Lincoln, from Ulysses S. Grant to Clinton, for authors from Harriet Beecher Stowe to Salmon Rushdie, for scientists from Thomas Huxley to Benoit Mandelbrot, and for many others.

In this tradition of public service, The Great Hall continues to be a place for public knowledge and debate, and has been the site for recent public addresses by 2008 Presidential candidates John Edwards and Barack Obama, NYC Mayor Michael Bloomberg, Nobel Laureate Wangari Maathai, former President William Jefferson Clinton, and Peter H. Gleick, President and Founder of the Pacific Institute for Studies in Development, Environment and Security.

When The Cooper Union opened in New York City in 1859, the physical structure of the original building closely followed Peter Cooper's educational philosophy. The original five-story building was designed by Frederick A. Petersen in the Renaissance Revival style, with studios and classrooms above a first floor of stores open to the public. In 1890, Leopold Cyrus W. Eidlitz added studio skylights and additional floors to the building. Now a national historic landmark and widely referred to as one of New York's grand monuments, the Foundation Building exemplified not only Peter Cooper's dedication to social mobility through education, but his recognition of the power of technology and the importance of art and design. The tallest building in New York City in 1859, this first "skyscraper" was also the first building to be designed with a rolled iron I-beam infrastructure and the first to house an elevator shaft top to bottom, although the passenger car for such a shaft had not yet been developed.

In 1974, John Hejduk, the first Dean of the School of Architecture, designed a major alteration of the Foundation Building, aligning the program of the interior with the pedagogy of the schools, while leaving the exterior largely intact. In the words of Ada Louise Huxtable, the renovation was "the best of both worlds," with the "Renaissance shell intact" and the "clarity and detail of the consciously sophisticated modernism of the interior" attesting to "the creative continuity of history and art." The brownstone exterior of the Foundation Building was extensively restored under the direction of Platt Byard Dovell between 1999 and 2002.

The Cooper Union's new academic building, designed by Thom Mayne of Morphosis Architects, is across Third Avenue from the Foundation Building. It examines once again the relationships between the academic programs of the school, and the school's place in the city, through a significant work of architecture. The New York Times has called the building "a bold architectural statement of genuine civic value", noting that "Its lively public spaces reaffirm that enlightenment comes from the free exchange of ideas", recalling Peter Cooper's own words in founding the institution 150 years ago.

## 1.2 Institutional Mission

(Excerpted from the institutional self-study "Sustaining the Mission", prepared for the Middle States Commission on Higher Education decennial review, April 2008.)

The Cooper Union Statement of Mission:

*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.*

The mission statement identifies the uniqueness of The Cooper Union's educational environment, stresses a commitment to particular disciplines and approaches and indicates the means to achieve or support the stated objectives. The three degree-granting schools are named in the first line and the humanistic emphasis of all learning is appropriately recognized.

The mission statement also conveys that the school is unified historically, through Peter Cooper's original bequest and example. In the words of the last two Middle States reports, The Cooper Union is unified by 'the special legacy of Peter Cooper.' Although no formal instruction in institutional history currently takes place, aside from student orientation, every new student soon becomes aware that Peter Cooper's benefaction bestows a sense of privilege, distinctiveness and social responsibility. Students in the self-study working groups for the various Middle States standards related that they were more than just thankful for an endowment that allowed for full scholarships; they were also grateful that Peter Cooper provided a model for non-pecuniary ambition. Among other benefits, the full scholarship allows students to think more broadly about the limits and possibilities of a career, as well as the danger in reducing aspiration to the singular pursuit of personal wealth.

### **1.3 Program History**

The 2009-2010 academic year marks the 150<sup>th</sup> anniversary of The Cooper Union for the Advancement of Science and Art and almost 150 years of the teaching of architecture at the school.

The teaching of architecture at The Cooper Union began in 1859 and has developed continually to this day in response to the general development of the profession and its social and cultural context. Only one year after the opening of the school, eleven students were entered into the first class in architectural drawing by the Department of Night Instruction, leading to the formation of the Department of Architecture three years later. The first class of a four-year course in architecture graduated in 1887, and the alumni were numerous enough by 1898 to form The Architectural Alumni Association. By 1904, there were over a thousand applicants for courses in architectural drawing, among whom nearly seven hundred were admitted. The Trustees reported that "*The Evening Classes for Architectural Drawing have continued their very efficient work through the term under the same masters as in the preceding year, and with their accustomed excellent and practical result. It does not appear that this result could be improved in character under existing limitations of time given to the work of this course.*" The description of the courses shows a carefully calibrated drawing sequence, beginning in the first year with instruction in the use of scales and dividers, pens and brushes, together with the copying of frame, brick, stone, and structures. The study of the classical Orders, together with the drawing of plans and elevations of modern buildings, followed in the second year. These exercises were continued in the third year supplemented by a complete set of drawings from briefs and specifications. The fourth year consisted of "an original design with details," no doubt the origin of our present Fifth Year Thesis.

By 1907 the Architecture Department had developed a formal description of its curriculum: "*The Architectural Department is divided into two distinct sections, one the Construction section, in which the student is instructed in general building construction, the development of interiors, the preparation of plans and elevations for country houses, and original designs for city residences; while in the other section the*

*student is made conversant with the Orders, classical and other historical styles of architecture, interior development or decoration, and the preparation of a design for a city residence in one of the styles taught. The course in either section is four years. No entrance examination is required."*

The same year, the Architectural Alumni Association presented a \$10 prize for the best set of plans and sections and The Architectural Society of The Cooper Union was formed with nearly 100 students. Architectural drawing, then, as now, was a centerpiece of instruction, with the courses expanding to graduate the largest class (of forty) in the history of the institution. The downturns in the economy and construction in the war years of 1917-1919 caused a reduction in the number of applications. However, by 1925, applications were up and the initial version of the Home Test, a "written intelligence test," was required for the first time. It was later expanded in 1933 by the addition of a test in "Spatial Relations and Vocabulary," together with an examination for applicants to show their ability to draw geometric shapes and perform math problems, a test that was further elaborated in 1939.

But it was not until 1960 that the Art School proposed degree granting courses in Architecture and Fine Arts in the Day School and was renamed The Cooper Union School of Art and Architecture under the leadership of Esmond Shaw, an architect, who had been teaching at The Cooper Union since 1935. The structure of the architecture curriculum was now defined as a five year program, beginning with a foundation course and culminating in a thesis, and was accredited by the National Architectural Accrediting Board five years later:

*First Year (Foundation Course): Drawing I, Design (Three-Dimensional I), Design (Two-Dimensional I), Lettering I, Architectonics, History of Art, English Composition, Physical Education*

*Second Year: Architectural Design I, Architectural Construction, Graphics: Drafting and Descriptive Geometry, Perspective and Rendering; Mathematics II, Physics I, Oral Interpretation, World Literature I, World Literature II*

*Third Year: Architectural Design II, Mechanics of Materials and Structural Design I, Building Equipment I, Physics II, History of Architecture I, World Literature III & IV, Social and Economic Institutions*

*Fourth Year: Architectural Design III, Structural Design II, Building Equipment II, Working Drawings and Specifications, Landscape Architecture, Site Planning, History of Architecture II, Contemporary Literature, Social Philosophy*

*Fifth Year: Architectural Design IV and Theses, Structural Design III, Professional Practice, Town Planning, and History of Architecture III*

Esmond Shaw, by then Dean of the School of Art and Architecture, hired John Q. Hejduk in 1964 and appointed him Head of the Department of Architecture the next year. In 1975, on the completion of John Hejduk's renovation of the Foundation Building, he was named the first Dean of the now autonomous School of Architecture. Dean Hejduk developed and nurtured a highly creative and vigorous design program as the structural and philosophical core of the academic program, serving the School with dedication, commitment and passion until his retirement in 2000. During that time, The Museum of Modern Art publication, *Education of an Architect* (1971), documented and made public the nature of a decade of Design programs and pedagogy; *Education of an Architect* (1988), published by Rizzoli, conceived as a sequel to the 1971 publication and continuing the reflection of the rigorous investigation of significant issues in the changing conditions of contemporary architecture, included student work from 1972 to 1985. The legacy of John Hejduk remains a strong foundation for the continuing evolution of the School of Architecture.

In January 1982, endowed by the estate of Irwin S. Chanin, the School was named The Irwin S. Chanin School of Architecture. Irwin S. Chanin, an architect-alumnus of The Cooper Union and a member of the Board of Trustees, gave creative impetus, as a visionary builder, to the spirit of "modernism" in the evolving growth of New York during the '20's and '30's. In 1986, the faculty approved the establishment of the Irwin S. Chanin Distinguished Professorship and the Irwin S. Chanin Distinguished International Professorship.

On August 1, 2001, after a search involving the entire School of Architecture community, including alumni, and with the counsel of friends of the School from the broader professional and academic communities, Professor Anthony Vidler was appointed Acting Dean by President George Campbell, and upon accepting academic tenure at The Cooper Union was confirmed as dean on July 1, 2002.

Over the last eight years, through Dean Vidler's leadership, the School has energetically turned to the renewal of its Faculty, the revision of its curriculum, and the reinvigoration of its public programs. Almost 20 new faculty appointments have been made to the resident (full time and proportional time) and adjunct faculties in environmental technology, building technology, history, theory, and design. An inaugural class of eight students will begin studies this fall toward the new Master of Architecture (post professional) degree. The School continually sponsors or co-sponsors major public events including recent symposia on the issue of the emerging global crisis concerning the availability and consumption of fresh water; the development of New York City's West side rail yards, Mayor Bloomberg's New York 2030/New York City's Green Future and Architecture in India today. The School has established active relationships with New York City institutions including the AIA NY Chapter, The Architectural League of New York, the Whitney Museum of Art, The Museum of Modern Art, and the New Museum for Contemporary Art, reaffirming Cooper Union's position in New York as a center of knowledge and public debate concerning critical environmental, technological and cultural questions, and the potential of architecture to transform, ameliorate and re-frame the conditions of life itself.

## **1.4 Program Mission**

The Mission Statement for the School of Architecture first published in the 2003-2005 edition of the course catalog is as follows:

The mission of The Irwin S. Chanin School of Architecture is to provide for its students the finest professional education available within an intellectual environment that fosters and expands their creative capacities and sensibilities and establishes the foundation for a productive professional life. The School is committed to the belief that one of society's prime responsibilities is toward learning and education in the deepest sense: that the exercise of individual creativity within a willing community is a profoundly social act. Fundamental to the mission of the School is the maintenance of an atmosphere in which freedom of thought and exploration can flourish, where students can explore and utilize their special and individual talents, interests, and modes of working, to their highest potential.

The architecture curriculum is designed to prepare students for an array of opportunities in the profession, offering a cultural and intellectual foundation in the liberal arts as they relate to the design of the environment at all scales. The discipline of architecture is interpreted in the widest possible sense as a basis for a fully rounded education at the undergraduate level. 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 as a cultural practice with broad social and environmental implications. In a moment where the nature, role, and scope of the architect is rapidly assuming new directions and dimensions, in both the social and technological domains, the school emphasizes the principles of design and their underlying human values, while preparing students to respond positively to change. The program seeks to engender a strong sense of the ethical responsibilities of service and leadership, teamwork and individual creativity, essential to the development of principled professionals dedicated to interpreting and constructing the spatial needs of the community. Stressing the fundamentals of architecture, and with a basic commitment to their continuing renewal, the curriculum encourages the production of an architecture distinguished in concept and rich in spirit and significance.

## 1.5 Program Self-Assessment

The strength and unique character of the School of Architecture results from its integration of a strong liberal arts curriculum with a rigorous professional degree program, which allows students to engage in individual research and personal development through a five year studio based curriculum. The size of the school permits small classes and encourages lively debate and exchange among students and faculty alike. Required courses are structured as lecture/seminars that foster questions and discussion. The School's position within the Cooper Union as a whole encourages interdisciplinary and inter-professional exchange, while its location in New York City offers students access to extraordinarily rich architectural, urban, and cultural experiences.

Over the last five years the school has developed the studio curriculum in ways that have reinforced its strong traditions of design and craft while investigating problems that reflect the changing conditions of contemporary practice and the urgent issues of rapid urbanization and the need for environmental and cultural conservation. In response to a heightened awareness of the limits of planetary resources, students are urged to seek new architectural languages that are not simply expressive of a condition, but that work to transform, ameliorate and re-frame the conditions of life itself.

Another strength of the school is its faculty. The school has always maintained a mix of architects who define practice in a wide range of conditions, from independent, focused design work that seeks to advance contemporary form and theory, as well as substantially accomplished corporate architects who can represent the experience of large-scale projects and the access to technologies necessary to this scale of work. The faculty also includes distinguished historians, theorists, engineers and artists. Our faculty build extensively, lecture widely, are published in numerous journals and win numerous awards each year.

Most importantly, the school's vitality is evident in the accomplishments of its graduates.

Two alumni currently lead the schools of architecture at important universities, one as the dean of the School of Architecture at Princeton, and the other as dean of the School of Architecture at Rensselaer Polytechnic Institute; both maintain active practices. (A third alumna recently completed her term as the chair of the Harvard Design School.) Following his term as mayor of Charlottesville, VA, a graduate was recently named the director of design at the National Endowment for the Arts. Since 2004, eight graduates have been named as U.S. Fulbright Scholars; two graduates have been named as fellows to the American Academy in Rome, and one to The British School [Academy] at Rome. Graduates have become partners or vice presidents at Bovis Lend Lease, Gensler, Gwathmey Siegel Associates, HLW International, HOK and SOM to name a few. Many graduates are principals of their own

firms, frequently cited by the press and their peers as innovators and leaders in the profession.

Graduates are full-time members of the faculties of Carleton University, The City College of New York, Columbia University, The Cooper Union, Harvard, Iowa State University, Princeton, Rhode Island School of Design, University of Puerto Rico, University of Virginia, Virginia Commonwealth University in Qatar, University of Manitoba, Yale, and numerous other institutions of architectural and design education.

Since 2000, the School of Architecture has completed and submitted two major self study/planning reports, the first as part of an institution wide planning effort initiated by President George Campbell Jr., in Fall 2000, and the second as part of the college's preparation of a comprehensive Self-Study for the Middle States Commission on Higher Education decennial re-accreditation review in April 2007.

### **1.5.1 December 2000 Planning Report**

The 2000 Planning Report was developed following meetings that engaged the entire school community through a number of focused working groups. This self study occurred during a search following the retirement of the school's first dean. The report affirmed program strengths and identified challenges and long term aspirations. The report contained six principle goals:

- 1. To carry forward the high standard of excellence sustained by the school for the past 36 years.*
- 2. To foster interdisciplinary exchange, which acknowledges the complexity of interaction between distinct disciplinary fields, including new directions in research that will define the specificity of an architecture that responds to present social, cultural, ecological and technological conditions*
- 3. To continue, with increased capacity, to educate our students in techniques and consequences of digital image production and modeling as one among many forms of investigation and expression.*
- 4. To preserve the vital relationship between the educational program and its architectural substance in the development of the School's facilities, including establishing a new digital out-put workshop for the production of two dimensional and three dimensional work as a counterpoint to the fourth-floor shop, providing better equipped classrooms and spaces for public lectures, and establishing a dedicated School of Architecture Gallery.*
- 5. To strengthen the school's pivotal role in the public discourse on architecture through the expansion and enrichment of highly professional exhibitions, publications and lecture programs (both inside and outside the discipline of architecture), and developing the School of Architecture website.*
- 6. To establish a second degree program, the Masters of Architecture II. This post-professional degree would extend the vision of the under-graduate program and allow a further development of the school's pre-eminent position in the education of architects.*

The Institutional Strategic Plan, "Transcending Boundaries", incorporating the planning reports of all the divisions of the college, was issued as a draft in spring 2001. It included a re-commitment to the institution's full-tuition scholarship policy and the goal of improving facilities through the development of under-utilized real estate holdings, including the construction of a new academic building. However, the plan was never formally adopted, and before much could be accomplished at the program level, the local

and national financial turmoil following the terror attacks of 2001 brought The Cooper Union's precarious financial situation to the forefront. Long-term structural deficits in the school's operating budgets had resulted in a significant reduction in the school's endowment, an unsustainable model for a school that collects no tuition. Budget cuts were announced for fiscal years 2002–2004, calling for substantial operating reductions. Although most of the reductions were in administrative areas rather than in academic programs, the deans were asked to reduce their budgets by 5%, and actual overall reductions spread over the two year period amounted to about 16%. The president called for operating expenses to remain flat through 2006, with the goal of balancing the operating budget by fiscal year 2008.

The School of Architecture made substantial progress between 2001 and 2007 toward realizing many of the recommendations of its own 2000 plan:

*1. To carry forward the high standard of excellence sustained by the school...*

**Progress and accomplishments:** The dean made renewing the faculty and curriculum an overriding priority. Between 2001 and 2007, over 15 new faculty appointments were made across all subjects in the program. Where possible, salaries were increased to be more competitive with other professional schools in the metropolitan area, and faculty support for technology and attending conferences was made available. Required courses in History were expanded to include global and non-Western traditions, the third year curriculum was developed as a comprehensive year, and faculty assignments throughout the studio sequence were reviewed and changed as needed. Studio faculty were given course relief for one semester to develop new seminar courses, which were offered on subsequent semesters.

**Challenges that remained:** The school increased its resident faculty and provided support for faculty development within budgets approved by the administration; the development of new coursework in technologies was delayed.

*2. To foster interdisciplinary exchange...*

**Progress and accomplishments:** The curriculum now requires that students take 13 elective credits outside the discipline of architecture; new elective courses examine architecture in relationship to engineering, art, writing and mapping, (Agrest, Lewis, Bone, Turnbull, Woods, Vidler, Waltemath, and a number of visiting professors). The dean offered support to faculty teaching seminars for guest lectures in their classes. Students participated in The Cooper Union's program in Ghana, established by a professor in the School of Engineering.

**Challenges that remained:** Students and recent alumni recommend additional opportunities and support for joint projects and other interaction between the schools. Additional advanced courses in sustainability and ecology need to be developed.

*3. To continue, with increased capacity, to educate our students in techniques and consequences of digital image production and modeling...*

**Progress and accomplishments:** There has been tremendous improvement in the size and quality of digital facilities; the School of Architecture computer studio is more professionally managed, with technical support from the Cooper Union Computer Center and the newly appointed institutional chief

technologies officer; a laser cutter is shared with the School of Art; the is new faculty and curriculum for ARCH 118, new advanced digital electives are given at least once a year; and an advanced 3-D elective will be offered spring 2010.

**Challenges that remained:** The space to develop a digital "shop" was to be identified at the institutional level; availability of shared equipment would improve with the opening of the new building at 41 Cooper Square; full time, professional staffing remained a goal.

*4. To preserve the vital relationship between the educational program and its architectural substance in the development of the School's facilities*

**Progress and accomplishments:** As outlined in other sections, significant improvements have been made to the schools mechanical systems, all classrooms have been outfitted with user-friendly digital projection equipment, the Archive would be located in the Foundation Building, the School of Architecture was to assume priority scheduling for the Houghton Gallery, and five new office spaces were assigned for School of Architecture Faculty and staff.

**Challenges that remained:** Faculty office space in the Foundation Building needed refurbishing, scheduling classes and critiques could be difficult, expansion of 3-D digital output capabilities was delayed.

*5. To strengthen the school's pivotal role in the public discourse on architecture...*

**Progress and accomplishments:** The school has established and developed active relationships with NYC institutions such as the Architectural League of NY, the MoMA, the Whitney, the AIA NY Chapter, the Guggenheim, etc., resulting in the sponsorship of many major public programs and symposia since 2001 (55 since the last accreditation visit); a student lecture series has been re-instituted (5-7 lectures each semester); twelve public exhibitions were presented between 2001 and 2007 (five between the last accreditation visit and 2007), the school launched a newsletter, "Architecture at Cooper", in Spring 2007, and the School of Architecture Archive was given direct management of the school's website.

**Challenges that remained:** The institutional no longer provides any funding for exhibitions or publications, and fundraising directly for these efforts relies on the generosity of the Deans' Circle. (It is hoped that, now that 41 Cooper Square is complete, that contributions to this fund will increase.) Scheduling in the Houghton Gallery was difficult due to the heavy schedule of senior shows in the School of Art.

*6. To establish a second degree program, the Masters of Architecture (post professional) degree*

**Progress and accomplishments:** The new program was registered with the New York State Department of Education in 2006.

**Challenges that remained:** Budget and space constraints delayed the launch of the program.

### 1.5.2 2007 Self Study/Assessment Plan

As part of the process to prepare for the college's decennial re-accreditation review by the Middle States Commission on Higher Education, the dean of the School of Architecture called for a comprehensive review of the program in spring 2007 organized around seven focus groups:

- a. Curriculum**
- b. Faculty Development**
- c. Interdisciplinary Initiatives**
- d. Facilities and Technology**
- e. Public Programs**
- f. Relations to the Profession**
- g. Student Life.**

Faculty and members of the Student Council were asked to volunteer for their first and second choices. Each workgroup was comprised of approximately six resident and adjunct faculty together with a student representative. The groups met during the spring semester and submitted their draft reports to the dean on March 30<sup>th</sup>. School of Architecture alumni, representing graduation years between 1975 and 2006, and including several members of The Cooper Union Alumni Council, were invited to discussions and contributed many important insights into the effectiveness of the professional program at Cooper with respect to the performance of graduates over the years following graduation.

Each workgroup was asked to consider the following three questions taking into consideration the progress made since the last Planning Report of 2000 and the 2004 NAAB re-accreditation Site Visit:

1. What are the major challenges with respect to the education of architects to be considered by the school over the next 5 years?
2. What should our goals be with respect to the increasing challenge regarding sustainability, environmental impact, urbanization, and cultural differentiation in an increasingly global environment?
3. What are the implications of such goals with respect to the focus of your particular group?

In response to these questions and others generated within each group, the workgroups developed a range of proposals for the school to consider, some at the smaller scale of the management of ongoing programs and facilities, some at the level of goals and initiatives appropriate for an outline assessment and strategic plan. The recommendations were administrative, curricular, and programmatic, and have formed the basis of an on-going discussion in school committees with results that will be brought to the faculty for deliberation and action over the next three years.

The Report to the President from the draft reports generated by the workgroups outlined goals, objectives and strategies as follows:

#### **i. Program Mission and Vision**

The mission (see 1.4 Program Mission) was included in the report.

#### **ii. Priorities 2007-2012**

The overriding priority over the next five years will be to position the school, its curriculum, technological resources, and interdisciplinary programs, at both the undergraduate and graduate levels, in order to confront the fundamental problems of architecture and the environment that face local and global communities in the 21<sup>st</sup> century.

The aim will be to integrate the urgent questions of sustainability, ecology, environmental impact, and urban population growth, into the curriculum and with appropriate educational and technological resources at all levels, both within the school in courses and design studios, and in collaboration with Art, Engineering, and Humanities and Social Sciences in The Cooper Union, supplemented by invited lecturers and public programs.

### **iii. Curriculum**

#### **Goals and Objectives**

##### *Overall Program Goal*

To ensure that the five-year undergraduate program advances the humanist discipline of architecture as it embraces a wide cultural view that includes non-Western history, environmental ecology, sustainability, and global studies.

##### *Integration of the design studio and concurrent coursework*

To ensure the integration of issues of urban design, environmental concerns, sustainability and the structural poetics of architectural language at all levels of the curriculum in design studios and courses.

#### **Strategies for Achievement**

##### *Studio Sequence*

Coordinate the relationship of studios to each other, year by year, incorporating additional lectures on sustainability, materials, and technologies, building on the model of the integrated third year program.

##### *First Year Program*

Introduce the full range of architectural problems, including issues of structure, site, ecology, and sustainability during the First Year, “expanding the laboratory of tectonics as the foundation of the design program”.

##### *Ethical and Social Issues*

Emphasize the ethical and social aspects of architecture in the world, including the study of pressing social issues – the ever increasing global problem of slums and housing for the urban and rural multitudes, together with the increasing pressure on environmental resources of all kinds.

##### *Required Technology Courses*

To further develop the required courses in environmental technology, building technology, and structures to reflect current knowledge in the field, and integrate their subject matter into the design exercises of the Comprehensive Studio.

##### *Digital Courses*

To develop foundation and advanced courses in digital methods and techniques of analysis, representation, and fabrication as one of many forms of investigation, invention and expression.

#### *Master of Architecture (post professional) Degree*

To formulate the one-and-a-half year graduate post-professional program as an integral part of the school with a research focus on the advanced study of design, history, theory, and criticism; urban studies; and technological studies.

#### *Recruitment*

To recruit a student body with the ability to integrate environmental and cultural issues as related to all other concerns of the discipline. Especially important will be the recruitment of under-represented minority students and faculty in order to increase the diversity of the community as a whole. To establish a recruitment process that includes visits by faculty to designated high schools, as well as universities.

### **Progress and Accomplishments 2007-2009**

- New teaching assignments were made in the first, second, and fourth year studios
- The Thesis year is now structured as a semester of research and program development followed by a semester of the elaboration of the architectural response
- Environmental Technologies was reconfigured to be taught as a 6 credit course in the third year, emphasizing the relationships between environmental considerations and architectural form.
- New seminars have been offered in the areas of ecology, sustainability and ethics: ARCH 185 Crossings/The Feltman Seminar on Light: *Light is the Motivation*; ARCH 205 Advanced Concepts: *Environment, Sustainability and Architecture*; ARCH 225 Advanced Topics: *Sustainability Primer*; ARCH 225 Advanced Topics: *A Material Imagination of the Social Contract*;
- A new advanced seminar on 3-D digital production will be taught in Spring 2010.
- The Master of Architecture (post-professional) degree program enrolled its first class of 7 students in fall 2009.
- The Office of Admissions coordinates recruiting visits with the Admissions Committee

### **To be Achieved 2009-2012**

- Curriculum Committee to continue to work to develop coursework in technologies and sustainability.
- Admissions Committee to assess recruitment efforts and develop strategies with office of admissions and report to faculty.
- Student-teachers in The Cooper Union Saturday Program to continue to identify strong potential applicants from under-represented minority communities for application to the undergraduate programs
- Associate dean to work with dean of students and CWLA to develop programs to retain under-represented students admitted to the program.

## **iv. Faculty Development**

### **Goals and Objectives**

To provide resources to actively encourage and support faculty in their efforts to maintain scholarly, creative, and professional research and activities,

### **Progress and Accomplishments 2007-2009**

- Between 2004 and 2007, faculty have been granted support for travel to give papers at conferences; have been given support to develop new skills; have been supported through exhibitions of work, and have been given technology support..

### **To be Achieved 2009-2012**

- Associate dean to work with president's office and Institute for Sustainable Design to identify institutional support available to faculty, and to bring these opportunities to the attention of the faculty
- Associate dean to work with institution's web manager for increased use of on-line teaching tools
- Assistant to the deans for public programs to work with faculty on development of grant proposals
- Dean to continue outreach to other schools and professional colleagues to identify potential faculty from under-represented minorities

## **v. Facilities and Technologies**

### **Goals and Objectives**

The construction of The Cooper Union's new academic building, affecting almost 50% of the institution's academic space, affords an opportunity to review and renew facilities and technologies throughout the institution in full support of our evolving academic programs.

To renew the infrastructure and services of the Foundation Building to meet the same standards of sustainability, technological infrastructure, environmental quality and full accessibility as the new building.

### **Strategies for Achievement**

To review, redesign as necessary, and refurbish the existing mechanical and lighting systems to meet or exceed the sustainable and environmental quality standards of the new academic building.

To review, set new performance standards, and upgrade as necessary available "bandwidth" to meet or exceed the specifications of the new building, allowing high speed internet access in all areas of the building (wired and wireless), access to secure, dependable personal file storage, ready transfer of files from one digital facility to another, etc.

To upgrade all classroom and critique spaces as necessary to provide the same AV capabilities, presentation surfaces, acoustic quality etc. of the new building.

To create and professionally staff a shared digital output facility, providing at a minimum: large scale scanner, large scale high speed color plotter/printer, large capacity laser cutter(s), 3-d plotter, and a CNC multi-axial milling machine.

To identify and equip an appropriate space for the M. Arch. program research studio.

To expand the available office facilities for resident faculty.

To identify dedicated exhibition/presentation space for use by the School of Architecture in support of its exhibitions program and serve as additional critique space.

To re-design and implement the School's website to promote the mission, goals, and public awareness of the institution.

### **Progress and Accomplishments, 2007-2009**

There has been significant progress in upgrading the facilities of the School of Architecture, even since 2007. The mechanical systems of the third floor have been rebuilt; The Cooper Union Computer Center has installed a new high speed data "backbone" for the building; wireless access to the internet is available in the studios and library; digital projectors and speakers have been installed in classrooms and critique spaces; five additional office spaces for faculty and staff are ready to be occupied; the school now has priority scheduling for the Houghton Gallery; the School of Architecture Archive can now directly upload content to the school's website (it was previously administered by the Office of Public Affairs). See also section 2.1.1.

### **To be Achieved 2009-2012**

- Associate dean to work with the administration, the School of Engineering and the School of Art to identify spaces for shared 3-D digital output equipment, to accommodate the existing 3-D printer, as well as a new laser cutter and CNC router.
- Faculty member on Technology Committee to discuss needs for architecture within shared facilities.
- Administrative associate to work with counterparts in other schools and use new on-line centralized scheduling tools to identify appropriate space for pin-ups in 41 Cooper Square.
- Associate dean to continue to monitor progress toward ADA compliance; work scheduled for 2010.
- Associate dean to monitor schedule for start of work delayed from summer 2009, including new lighting in studios

## **vi. Interdisciplinary Initiatives**

### **Goals and Objectives**

The school should support enhanced interdisciplinary initiatives, both within the school itself (between courses, and between courses and studios), and within The Cooper Union. The disciplines of architecture, art, engineering, and the humanities and social sciences share a common interest in the fundamental problems of the environment, technological, and natural.

Interdisciplinary initiatives should not be confined to those represented within The Cooper Union but be expanded to include professions and disciplines essential to an understanding of architecture and

the environment, in order to provide a knowledge of the life, medical, and earth sciences, agriculture, health, economics, etc., as a grounding for the students' understanding of ecological issues.

### **Strategies for Achievement**

To include studio exercises posing specific interdisciplinary research components that include input from all required classes of that year into the design studio, on the model already developed in the third year.

To develop courses in the School of Architecture that are open to and relevant to students in the School of Engineering and Art.

To encourage interdisciplinary initiatives between the School of Architecture programs and outside academics, professionals, firms, or other entities, exploring the possibilities for student internships and learning experiences outside The Cooper Union.

### **Progress and Accomplishments 2007-2009**

- ARCH 153 Town Planning was changed from a 5<sup>th</sup> year requirement to a 4<sup>th</sup> year requirement to align with the 4<sup>th</sup> year studios, which focus on issues at the urban scale.
- New elective courses with an interdisciplinary focus have been developed and offered in recent years, including ARCH 185 Crossings/The Feltman Seminar on Light: *Light is the Motivation*; ARCH 205 Advanced Concepts: *Environment, Sustainability and Architecture*; ARCH 205 Advanced Concepts, *Drawn to Utopia*; ARCH 225 Advanced Topics: *Sustainability Primer*; ARCH 205 Advanced Concepts: *Mapping*; ARCH 225 Advanced Topics: *A Material Imagination of the Social Contract*; ARCH 225 Advanced Topics: *The Literary Dimension*; ARCH 205 Advanced Concepts: *Film Architecture* and ARCH 205 Advanced Concepts: *Interdisciplinary Conversations on Advanced Architectural Studies*.
- New elective course in architecture and theater to be offered spring 2010.

### **To be Achieved 2009-2012**

- Associate dean to discuss with Curriculum Committee potential for student internships and external learning opportunities to earn credit
- Dean to work at level of Academic Council to develop opportunities for projects across schools
- Dean to continue to bring visiting lecturers to the school for coursework of an interdisciplinary nature
- Faculty to develop studio projects that build on broader curriculum of their year
- The new Institute for Sustainable Design will provide opportunities for curriculum development and projects of an interdisciplinary nature across schools; the School of Architecture to work with the Institute to develop programs in support of the school's curriculum.
- Administrative Associate to work with counterparts to promote awareness of School of Architecture elective offerings open to students of other schools.

## **vii. Public Programs**

### **Goals and Objectives**

To continue to develop and expand the role of the school as a center for the discussion, debate, and interpretation of architecture and environmental knowledge at all scales, with wider public participation and professional collaboration.

### **Strategies for Achievement**

#### *Lectures and Symposia*

To expand the existing student lecture series and the public lectures organized in collaboration with the Architectural League of New York, to include specific topics for symposia and colloquia that impact understanding of the challenges facing architecture and related disciplines in the 21<sup>st</sup> century. Such initiatives should be undertaken where appropriate in collaboration with the other divisions and schools of The Cooper Union.

#### *Publications and Exhibitions*

To develop a coherent and lively publication program that includes publication of student and faculty work, the publication of lectures and symposia, and the development of a web page continuously updated with faculty and student work, staff activities and school events.

### **Progress and Accomplishments 2007-2009**

- Since 2007, the school has strengthened its relationship with the league and has co-sponsored symposia with the NY Chapter AIA (2007), the Institute for Urban Design and the Office for Long Term Planning and Sustainability for New York City (2007), the Whitney Museum of American Art (2008), Parsons the New School for Design (2009) and others.
- Newsletter *Architecture at Cooper*, launched in 2007, is expanded to include more coursework and information about school activities
- The work of the Thesis class of 2008 prepared for publication (summer 2008)
- The work of the 4<sup>th</sup> year architectural urbanism studio prepared for publication (summer 2009)

### **To be Achieved 2009-2012**

- Dean to continue to build relationships with local professional and cultural institutions
- Dean and associate dean to work with leadership of Dean's Circle to host development events
- Associate dean to work with the development office to secure funding to develop the school's web-site to include streaming lectures
- Provide support to faculty who have proposed symposia for fall 2009 and fall 2010
- Work with the new Institute for Sustainable Design for support of public programs focused on issues of environmental and cultural conservation and sustainability
- Identify publisher for books of student work
- Expand *Architecture at Cooper* to include additional content about coursework and public programs

## **viii. Relations to the Profession**

### **Goals and Objectives**

To increase communication and interaction between students and design professionals in order to better prepare graduates for the transition to practice.

## **Strategies for Achievement**

### *A Council on Practice*

To expand and formalize the existing network of firms and/or alumni contacts for graduates to gain access for professional advice, IDP mentorship, and/or employment.

### *Co-op Program*

To investigate the possibility to include work-study programs or cooperative professional experiences to count toward school credit.

### *Professional Practice*

To continue to develop the professional practice course in order to reflect contemporary conditions of practice, introducing issues of practice and information regarding IDP programs earlier in the curriculum.

## **Progress and Accomplishments 2007-2009**

- Arch 154 Professional Practice curriculum is updated annually, and includes site visits to offices of various scales and focus.
- The faculty member teaching ARCH 154 Professional Practice now introduces the IDP program to students in the 3<sup>rd</sup> year.
- Students receive free membership to Architectural League of New York, and participate in annual student program at no cost

## **To be Achieved 2009-2012**

- Associate dean to discuss with Curriculum Committee potential for student internships and external learning opportunities to earn credit
- The faculty member teaching Professional Practice to work with associate dean and administrative associate to develop "Council on Practice" with alumni.
- Dean and faculty to identify appropriate colleagues in professional community to participate in and support council
- Associate dean to work with students interested in establishing active chapter of AIAS

## **ix. Student Life**

### **Goals and Objectives**

The School of Architecture, with the institutional support of The Cooper Union should do all that is possible within its means and available resources to support the personal as well as professional development of its students.

### **Strategies for Achievement**

To revise the timeline for coursework and studio deadlines in order to afford greater opportunities for students to complete coursework outside of studio review obligations.

To work with The Cooper Union Administration to provide adequate facilities that promote the health and wellbeing of all its students.

To work with The Cooper Union Administration to identify opportunities for shared recreation facilities with other institutions in the neighborhood.

To work with The Cooper Union Administration to ensure a healthy and safe studio and classroom environment.

### **Progress and Accomplishments 2007-2009**

- As detailed above and in section 2.1.1, there have been significant improvements made to the school's facilities since 2007.
- The student council redesigned the layout of the studio for improved circulation, provisions for common work areas and storage, and greater access to natural light
- The associate dean of students has secured "court time" at a basketball court in the neighborhood for team use
- The Foundation Building colonnade has been re-fitted for informal student use following the completion of the new building at 41 Cooper Square
- 41 Cooper Square houses a student lounge and other spaces for informal student use.

### **To be Achieved 2009-2012**

- Associate dean to work with facilities manager to develop a maintenance schedule for daily, weekly, monthly and annual maintenance activities for the facilities of the school.
- Associate dean to work with business office to track continued improvement of facilities (studio lighting, ADA, etc.)
- Dean to schedule final reviews to allow time for completion of other coursework
- Dean to work with Academic Council to explore "reading week" in academic calendar
- Associate dean to work with Office of Student Services build on relationships with neighborhood institutions with recreational facilities

## 2. PROGRESS SINCE THE PREVIOUS SITE VISIT

### 2.1 Summary of Responses to the Team's Findings

The Visiting Team Report following the school's reaccreditation visit on 27-31 March 2004 noted 4 conditions "not met". The school was reaccredited for 6 years, with a Focused Evaluation Visit to occur after 3 years. The Focused Evaluation Visit took place 30 September/1 October 2007. In its report dated 1 October 2007, the Focused Evaluation Visiting Team found each of the four same Conditions to be "met".

#### 2.1.1 Condition 7 Physical Resources

*VTR March 27-31, 2004: "This condition continues to be unmet from the previous VTR. While steps have been taken to address immediate disabled access problems in the seventh-floor spaces dedicated to the School of Architecture since the last visit, the Foundation Building remains non-compliant with the full range of ADA requirements. The HVAC system, both heating and cooling, continues to be inadequate and a problem for the students in the common design studio space. Since the last visit, the Foundation Building has had an ADA assessment, and there is a capital plan for new building development and renovation at the institution level as part of the capital campaign for a new building to house other Cooper Union facilities. While this condition continues to be unmet, the Visiting Team understands the status of the planning for new and renovated facilities, and feels this situation needs to be monitored in the future to ensure that these issues are addressed*

*The shop facilities shared with the School of Art and the high-end computer labs shared with the School of Engineering are well equipped and readily accessible to all architecture students. The issue of faculty offices has been addressed to a degree. Again, the real solution to this issue comes in the future with the reallocation of space resulting from the capital development and renovation process. At this time, the Visiting Team actively supports having a dedicated gallery space for the architecture program, ...and the development of high-end computer labs for the program's use. These should be coupled with a consolidation and upgrading of space within the School of Architecture during the upcoming renovation portion of the institution's capital campaign."*

#### **Since the previous site visit**

*Focused Evaluation Report, 1 October 2007: The program has made an impressive list of accomplishments in the short period of 3 ½ years since the last visit.*

1. With the completion of its new academic building, a significant milestone has been accomplished toward realizing The Cooper Union Master Plan for the comprehensive renewal of academic space throughout the college and the significant increase of annual revenues through the development of its heretofore-underutilized real estate assets. The Master Plan includes the construction of a new building comprising almost half of the academic space of the institution, as well as renovations to the interior of the Foundation Building. Construction of the new academic building at 41 Cooper Square, designed by Thom Mayne of Morphosis, was completed this summer, and the first classes will be held in the building in September 2009. The new academic building was designed to achieve Platinum standards and will be the first academic laboratory building in New York City to achieve LEED Certification. It will house all the facilities for the School of Engineering and the Faculty of Humanities and Social Sciences, as well as studios for

students in the School of Art. The School of Architecture will share in the use of many facilities in the new building programmed for use by all schools, including classrooms, drop-in computing facilities, a large auditorium, a new gallery and dedicated office space for faculty or staff.

2. In January 2008, The Cooper Union commenced a long-term lease agreement with Edward J. Minskoff Equities, Inc. to develop 51 Astor place (the former site of the School of Engineering) upon the completion of the move to the new academic building. This transaction marks a significant step toward insuring a sustainable financial infrastructure for The Cooper Union in the foreseeable future.

3. During the 2008 fiscal year, The Cooper Union Board of Trustees approved a budget for capital projects in the Foundation Building to a total of \$11.3 million. This budget included approximately \$8.4 million to completely rebuild the existing mechanical system, designed and installed in 1975, including a new central plant as well as new air handling equipment, new ductwork where necessary, and a new Building Management System. The remaining budget was to be used to 1. Make necessary repairs on the deteriorated vault space below Third Avenue, 2. Bring the historic building toward full ADA compliance, 3. To accommodate changes in programming, and 4. To make other building improvements such as upgrading classroom and studio spaces with information and digital technologies, replacing worn furnishings and finishes, and improving lighting.

4. During the 2007-2008 academic year, capital projects for the Foundation Building were defined by a work group comprised of the Design Team and representatives of the School of Architecture, the School of Art, the Office of Buildings and Grounds, and The Cooper Union administration. A "master schedule" for accomplishing the work in a fully and continuously occupied building was developed according to program and institutional priorities. The work was separated into three general phases:

Phase 1: replacement of all boilers, chillers, cooling towers, the new combined heat-power co-gen plant, and interior mechanical work to be completed during the summer 2008

Phase 1B: to be completed during the 2008-2009 academic year and the summer of 2009

Phase 2: to be completed during the 2009-2010 academic year, and the summer of 2010

The mechanical work for the architecture spaces on the third floor and the shop and classroom spaces on the 4<sup>th</sup> floor were identified for Phase 1 completion, and were completed during Fall 2008. In fall 2008, following the financial market collapse, some projects initially identified as Phase "1B" work were shifted into Phase 2, and all non-essential capital projects in the Foundation Building were put on hold.

5. During the summer of 2008, the mechanical systems on the third and fourth floors were completely rebuilt. Design criteria included meeting the highest standards for fresh air make-up, meeting best practice for noise levels in classrooms and offices, improving comfort in studio spaces through multiple zones on dedicated thermostats, reducing energy use with sensors and controls, and an integrated Building Management System. All existing air handlers were replaced with new units, and a unit dedicated to the lecture classroom F315 was added to the system. Constant volume air distribution was replaced with a variable air volume system. Acoustic consultants developed details and specifications to reduce mechanical noise in classrooms and eliminate mechanical noise from the faculty offices, which are located below the mechanical equipment loft. The "big studio" was divided into 8 thermal zones. Approximately 40% of the ductwork on the third floor was replaced. The work was completed in fall 2008 with an approximate value of \$500,000.

6. The state-of-the-art combined heat and power (CHP) system has been installed in the Foundation

Building to reduce resource consumption, reduce cost and to serve as a case study for integrating new such systems in historic structures was scheduled as Phase 1 work. The system is expected to be operational in Fall 2009.

7. "User-friendly" interfaces for digital projection and recording have been installed in all rooms on the third and seventh floors that are used by the School of Architecture as classroom and critique spaces, making all of our classrooms "smart" classrooms that require minimal set-up for digital presentations. Because of the simple interface, specified by our "in-house" Audio Visual Resource Center, projectors can be used by students after normal class hours.

8. Wireless network access is now available in all studio spaces on the third floor of the Foundation Building.

9. New hardware and software have been purchased and installed in the School of Architecture Computing Studio, resulting in all workstations being less than 3 years old. Five additional workstations are in production for the studio.

10. A new high speed, dual roll full color plotter was purchased for the School of Architecture Computing Studio in the summer of 2008. This second plotter resulted in significantly improved plotting, with little or no wait time even during periods of extremely heavy use at the end of each semester.

11. A donor has fully supported the purchase of a three-dimensional printer for the School of Architecture as part of a larger gift to the school. This machine allows students to explore new methods in digital design, prototyping and fabrication. The printer, along with a Powder Recycling Station was installed and made available to students for trial production in spring 2009.

12. Following ADA reports developed by The Cooper Union and Ove Arup & Partners California, Ltd., progress has been made toward bringing the Foundation Building into full compliance with the ADA.

- New door hardware necessary to replace the existing orbit knobs with lever handles have been researched, specified, and priced for doors throughout the Foundation Building. This work was originally identified for Phase 1B completion. It is now expected to begin during the 2009-2010 academic year.
- The conversion of an existing bathroom on the third floor has been designed and priced as part of Phase 2 work, upgrades include modifying the door swing, and installing new fixtures and fittings for improved ease of use.
- A grant to be used to upgrade The Great Hall allowed for the installation of permanent ramps within the hall as well as accessible seating areas. This work was completed in spring 2009. A master plan for the hall includes the reconstruction of the entry area as a continuous ramp to eliminate a change in grade, and the design for full access to The Great Hall stage. This work is awaiting funding.
- Required life safety signage conforming to the NYC Building Code and the ADA have been installed.

## Background

In 2001, President George Campbell, Jr. announced an institutional campus master plan that anticipated the pedagogical, technological, environmental, aesthetic and economic challenges of the 21st century while seeking to preserve Peter Cooper's mandate of a tuition free education for all admitted students. The master plan called for constructing of a new academic building on the site of the Hewitt Building, and vacating the existing Engineering Building at 51 Astor Place upon the completion of the new building. The master plan also called for the refurbishing the Foundation Building, including replacing existing building systems as necessary to meet contemporary standards for building performance (including full accessibility) while preserving the 1974 design of Dean Emeritus John Q. Hejduk. In consultation with the School of Architecture and the School of Art, The Cooper Union identified the major needs to be addressed in the Foundation Building: a new combined heating and power (CHP) plant; fully refurbished HVAC system; elevator upgrades; code and ADA compliance; IT and AV upgrades and construction as necessary for reprogrammed areas. The concerns of the Visiting Team in 2004 in regards to the physical resources of the School of Architecture focused primarily on issues of compliance with the full range of ADA requirements and inadequate HVAC systems for the studios and classrooms. Minor changes to the program of the Foundation Building required funding, but most of the funds dedicated in the capital campaign for its renovation were dedicated to the renewal of its infrastructure and building systems and the resulting improvement of the interior environment. The Master Plan lastly stipulated the development of Cooper Union properties not used for its academic spaces to ensure a sustained income stream to support the full-tuition scholarship principle in perpetuity.

**The Hewitt Building**, built in 1912, was demolished during the 2006-2007 academic year, and construction of the new academic building, designed by Thom Mayne of Morphosis Architects, began in summer 2007. Following two years of construction, the new academic building was completed in summer 2009. The "old" engineering building at 51 Astor Place was formally vacated, and the full program of the School of Engineering was moved in June 2009, with classes scheduled to begin in the new building in fall 2009.

**A campus-wide "New Academic Building Committee"** was established in late spring 2004 during the schematic design phase of the new building and included representatives of the administration, faculty (from all schools and the Faculty of Humanities and Social Sciences), The Cooper Union Library, The Cooper Union Computer Center and students. As the completion of the new academic building would result in a reduction in overall space for The Cooper Union, the committee was to advise the administration on shared uses and other efficiencies in order to accommodate the needs of all the schools and the Faculty of Humanities and Social Sciences in the final building design.

**The new academic building** at 41 Cooper Square will house the entire program of the School of Engineering, studios for the School of Art as well as facilities for the institution as a whole: state of the art research and teaching laboratories, lecture, seminar and studio classrooms, faculty offices, the Cooper Union Computer Center, a lecture room with video-conferencing capabilities, and important public spaces such as a second exhibition gallery and a new 210 seat auditorium. The new building will also provide, with the Foundation Building it faces, a "visible statement of The Cooper Union's academic and civic values." It is difficult to overestimate the impact that this new building may have on the Institution as a whole, including enhanced research and instruction, greater interaction between the schools, and expanded public programming. A formal ribbon cutting ceremony for 41 Cooper Square will be held on 15 September 2009.

**Despite the overall reduction in space for The Cooper Union**, the School of Architecture has gained a

small amount of new space for its program following the completion of the new academic building. The School of Architecture has been designated the primary "steward" of the Houghton Gallery in the Foundation Building, resulting in significantly more access for both exhibitions and informal pin-ups and project critiques. In spring 2009, the School of Architecture Archive moved to the second floor of the Foundation Building following 2 years in temporary space. The archive collection is an important research and assessment resource and its new adjacency to the studios and the School of Architecture office affords easier access by students. The School of Architecture was assigned clean, dry storage space in the sub basement of the new academic building, providing needed space for storage of student work and other archive and office use. A shared office for two faculty/staff on the second floor of the Foundation Building, and two offices in the new academic building for three faculty/staff have been assigned to the School of Architecture in addition to our existing office space. These spaces have been assigned by the dean in consultation with the faculty for occupancy in fall 2009.

The following projects have been completed since the NAAB 2004 Site Visit, or are in process at this time:

### **2.1.2 Mechanical, electrical, environmental**

In 2006, SourceOne Inc., a national leader in energy management was retained by The Cooper Union to perform a physical assessment of the Foundation Building to determine the condition of the electrical and mechanical infrastructure and to recommend alternate ways to improve future power and cooling requirements. An HVAC Master Planning Review was delivered to The Cooper Union on 6 June 2006. SourceOne Inc., noted that the "Foundation Building's existing mechanical systems are old, antiquated and not energy efficient". Their report includes a series of recommendations including:

i. **"Maintenance:** The building's air duct system had not been inspected nor maintained for many years. The air ducts must be littered with years of accumulated dirt, debris and allergens. Testing and balancing the air of the HVAC system has also not been done as part of the HVAC scheduled maintenance. We recommend air duct cleaning and balancing be performed to help improve the air quality in the building and enhance the efficiency of the HVAC system."

In summer 2006, the ductwork and the cooling coils of the HVAC system throughout the Foundation Building were professionally cleaned by certified technicians. The ductwork surfaces were inspected for mold and additional cleaning and remediation were performed as necessary. Included in the scope of work was the removal and manual cleaning of all diffusers and return air grilles, solvent cleaning of all cooling coils and scrubbing and vacuuming of all interior surfaces of all ductwork throughout the Foundation Building. The work, completed in September 2007, was valued at about \$60,000.

Immediately following cleaning the ductwork, the HVAC air-handlers in the Foundation Building were tested for air output and the entire system was rebalanced. A full report was issued at the completion of rebalancing that noted many deficiencies in the system, including inoperable outside air dampers, missing volume dampers, and units delivering air below their rated capacity and/or design loads.

The value of the balancing work and balancing report and recommendations was about \$45,000. The following summer (2008), the mechanical systems on the third floor were completely rebuilt and approximately 40% of the ductwork on the third floor was replaced.

ii. **Infrastructure Upgrades:** SourceOne developed various scenarios for the upgrade of the power,

heating, and cooling infrastructure systems of the Foundation Building to modernize the plant, reduce cost, improve performance and to reduce overall energy and other resource consumption (for example, water use).

The Cooper Union was awarded a \$422,450 grant from the New York State Energy Research and Development Authority (NYSERDA) toward the installation of a combined heat and power system in the Foundation Building, "demonstrating the ability to integrate clean, efficient CHP into a 150 year old landmark building in the heart of New York City." This award allowed the design process for the new CHP system to proceed during 2007-2008 academic year. A complete load analysis of the Foundation Building with recommendations for reuse, replacement, and reconfiguration of the heating, cooling and air distribution system was completed in March 2007 by the Syska Hennessy Group. A design team for the new mechanical system as well as other capital work was hired in summer 2007, including Gruzen, Sampton Architects and JFK&M Consulting Group.

**iii. ADA and Code Compliance.** In 2006, the School of Architecture performed an ADA review of all facilities in The Cooper Union typically used by our students in the course of their studies. In addition, The Cooper Union contacted Ove Arup & Partners California Ltd. to prepare an Accessibility and Life Safety Survey of the entire Foundation Building. The building was analyzed for compliance with current standards established by the National Fire Protection Association, the Americans With Disabilities Act, the New York City Building Code, and other authorities having jurisdiction. The work identified in the report was prioritized as follows, with the highest priority work contracted beginning spring 2006:

- a. Work necessary for code compliance or immediately necessary equipment repairs
- b. Work necessary to achieve "due diligence" for building conformance with standards of "good practice"
- c. Work necessary to meet the highest professional standard for interior environmental quality industry and sustainable practice.

In spring 2006, The Cooper Union installed new signage as required by the NYC Building Code. The scope of work included signs for stair identification with reentry information, floor identification, restroom identification, and a wheelchair access directional entrance sign for the building exterior. The work also conformed to the ADA. The value of this work is about \$10,000.

During the summer of 2007, both elevators in the Foundation Building were fully upgraded, including ADA compliant call stations, cab control panels, and station annunciators. The value of the work was approximately \$60,000.

ADA compliant door hardware was specified and priced.

The accessible lavatories on the 3rd and 6<sup>th</sup> floors of the Foundation Building are to be refurbished as part of Phase 2 work.

**iv. School of Architecture Computer Studio.** The School of Architecture continually renews and develops its computing facility on the seventh floor of the Foundation Building. The Cooper Union Computer Center (previously administered by the School of Engineering, but now serving as an institution wide resource) now administers digital facilities college-wide, and works with all Schools to share both resources and expertise, in an effort to avoid redundancy while standardizing the capabilities of all

computing studios and classrooms.

- The CUCC and School of Architecture have supported a hardware replacement cycle of approximately every three years. Since 2004, all hardware has been replaced, including 4 new high-end multiple-processor rendering stations (summer of 2007), and 4 Macintosh high speed dual processor iMacs, (summer 2008). An additional 5 Macintosh stations configured for both OSX and Windows, are scheduled for delivery in September 2009.
- A Linux environment Samba file server with 900 Gig capacity (mirrored for additional security) for temporary work storage and file sharing was designed, built and installed for the School of Architecture by the Cooper Union Computer Center in fall 2006. Given its capacity and stability, all students effectively have unlimited digital storage capacity on this server.
- The studio out-put capacity was improved with the addition of a new high speed color printer (200), an HP 42 inch Design Jet color plotter (summer 200), and a new HP 42 inch Design Jet 4500PS (Fall 2008). A ZPrinter 310 Plus 3D Printer and Powder Recycling Station were donated by the family of an alumnus in spring 2009.
- All software used by the students is upgraded as necessary, to the latest version on a continual basis. (See 3.8.3)
- New task chairs were purchased for all workstations in the Computer Studio (spring 2008). The value of this improvement is about \$6,000.

**v. Network Access in the Third Floor Design Studios.** The Cooper Union Computer Center developed a prototype system for secure, cross platform wireless access to the Cooper Union network and the Internet via student owned laptops. The system was installed in F330, the “big studio”, (summer 2006) and extended to provide Internet access in the studios in rooms F313 and F314 (fall 2007), affording all individual studio spaces in the School of Architecture high-speed Internet access. The system is widely used by students with laptops for research, file storage and file transfer.

**vi. Lecture Room F315.** The School of Architecture lecture room has been equipped with a ceiling mounted digital projector, speakers, and A/V equipment that allows for special lectures to be recorded. A wall interface is located at the front of the room creating a means to switch easily between output methods and media. As our “analog” slide projectors are still in use by our history faculty as well as invited speakers and others having outstanding slide collections, slide projectors are equipped with remote control. Although new seating (which will allow wheelchair access in the room) has been postponed, new carpeting was installed in September 2009. When completed, the value of upgrades to Room 315 will total about \$60,000.

**vii. Sculpture Shop.** At the requests of the Deans of both the School of Art and the School of Architecture, The Cooper Union has installed an Epilog 36 EXT computer controlled laser cutter on the 4th floor of the Foundation Building as part of the Sculpture Shop, enhancing the 4th floor as the center of state of the art three-dimensional production for all three schools. Protocol for the use of the machine was developed jointly by both schools.

**viii. Great Hall.** In 2006, the Architectural League of New York provided the School of Architecture with a \$15,000 grant toward the purchase of three digital projectors with long-throw lenses and two portable

projection screens to allow simultaneous projection on three adjacent screens, eliminating the problem of restricted sight lines in The Great Hall. The School of Architecture provided about \$6,000 toward this project, and The Cooper Union provided two 12' x 12' collapsible projection screens.

In 2008, The Cooper Union was awarded a \$650,000 grant from the Peter J. Sharp Foundation to refurbish The Great Hall. The grant was used to install three ceiling mounted digital projectors, a new sound board, increase lighting and recording capabilities, new ramps, new chairs and new carpeting. Efforts were made to maintain the historic integrity of the space and to allow for accessibility and comfort to a broad audience.

A new long-term exhibit, "Advancing the Mission - The Cooper Union at 150," has been designed and is scheduled to be installed in The Great Hall lobby in September 2009. The exhibit presents the story of The Cooper Union, its origins in the values held by Peter Cooper, and its historical promotion of the democratic ideals of free education, social justice, philanthropy, and civic virtue. The Great Hall's critical role in advancing The Cooper Union's ideals is emphasized, as is the evolution of the Institution has embraced in continuing its leadership in public service.

### **2.1.2 Condition 12.11 non-western traditions**

*VTR March 27-31, 2004: "This continues to be an unmet criterion. Unlike other content areas of the curriculum that have been addressed since the last visit, it seems little has happened here to address this deficiency."*

#### **Since the previous Site Visit**

*FER, 1 October 2007: The updated content for both ARCH 115 History of Architecture I (new course content taught since Fall '06) and ARCH 125 History of Architecture II address very well the deficiencies found during the last visit. These courses have been updated to reflect a more global awareness of the traditions of architecture.*

1. In 2005, the Faculty of the School of Architecture approved a change to the existing curriculum providing that the required History of Architecture sequence be expanded to include topics in non-western architecture and building traditions according to their appropriate or chronological position in the sequence. Each course of the four-semester sequence is now a three-credit course that address the history of architecture globally, rather than from a "western" vs. "non-western" perspective.
2. The faculty teaching the core history sequence each revised their individual course syllabi to include topics in non-Western traditions and invited guest speakers with particular areas of expertise to give focused lectures in individual classes. The exchange of ideas across the shifting borders of "east" and "west" was emphasized.
3. The syllabus for ARCH 125, History of Arch II, semester II was revised to include topics of contemporary global practice.
4. The syllabus for ARCH 154, Town Planning has been extensively revised to include topics of urban development throughout the globe, from the formation of the earliest cities to the present day "recombinant" mega-cities.

5. Elective courses addressing non-western topics continue to be offered and new courses are continually under development.

6. Many students engage issues of non-western and global traditions as well as contemporary issues of global consequence in their thesis projects. The school has helped to support such projects by assisting students with small "travel fellowships" in order to conduct field research relevant to their thesis. Beginning with the 2009-2010 academic year, The William Cooper Mack Thesis Fellowship program, established in honor of a School of Architecture alumnus, will provide endowed support for thesis related research, including travel costs. Recent thesis projects have included "A Gypsy encampment in Barcelona", "Reversal: Reinventing the Trans-Arabian Pipeline", "The Modernization of the Alaskan Village", "The Melt Zone: An Urban Plan for the Two Nogales", "Jaffa-Yafo: Reciprocal Urban Spaces in a De-urbanized City", "A Campus for the Languages of South Africa", and "Famafgusta, Cyprus: Refuge Within a Ghost Town". More Thesis project descriptions will be available in the team room during the Site Visit.

## **Background**

After a year of research and discussion following the 2004 NAAB visit, the School of Architecture concluded that its existing history sequence of four-semester long 2-credit courses needed to be expanded, in order that the canons and traditions of non-western architecture and design be fully integrated into the core program of the school. This would enable advanced courses in non-western architectural topics to be founded on a rigorous four-semester base in the knowledge and understanding of global architectural practice in its historical development.

The history of architecture as taught at the School of Architecture now comprises the global history of monumental and domestic architecture, building traditions, and environmental cultures from antiquity to the present. The four semester survey course, meeting for three hours a week for fifteen weeks a semester, is roughly divided according to chronology but treats architecture and related building traditions on a global scale.

While the four-semester survey introduces the students to the widest range of examples, practices, and cultures, attention is also paid to selected in-depth case studies, where the interaction between social, environmental, architectural, and technical considerations can be studied in detail. Specialists in the history and analysis of specific traditions are invited to contribute insights into building practices, spatial and environmental conditions, and architectural examples throughout the world. The old idea of a separate field comprised of "non-western traditions" is thereby absorbed into a historical and geographical continuity that embraces building traditions at all scales throughout the world.

The dean of the School of Architecture (an historian) meets each year with each faculty member currently teaching the history classes to discuss examples that might be incorporated into their expanded courses, and to make recommendations as may be appropriate for scholars to be invited for focused lectures within each course. In addition, the dean discusses potential topics in support of global studies and other required courses, such as ARCH 153 Town Planning, or upper-level seminars in ARCH 225 Advanced Topics. Special lectures in each history course are scheduled and posted in advance, and all students and faculty are invited to attend. The history faculty will continue to develop these initiatives, introduce new topics in non-western areas, and invite a larger roster of specialist scholars to contribute to their classes.

In all cases the required and suggested bibliography for each course was revised extensively with the

addition of surveys and specialized texts dealing with non-western traditions. Course descriptions are included here, and full syllabi and reading lists will be available in the team room during the site visit. The requirements for each course now include examination questions and paper topics covering global architecture and architectural traditions.

### **ARCH 115 History of Architecture I semester I (required)**

Emphasis is given to the development of monumental and domestic architecture in the Middle East, North Africa, and the Mediterranean basin, considered as a geographical and cultural entity in long-term development. Specialists in building theory and practice in antiquity are invited to address subjects such as the emergence of stone traditions out of wood, the development of building practices distinct from those of sculpture and military engineering.

The course includes non-western segments such as "Cave: Art of the Stone Age", "The Invention of Time: Egypt, the Old Kingdom", "The Invention of Site: Egypt in the New Kingdom" and "Tower: Mesopotamia." In addition, the course includes a visit to the Egyptian wing of the Metropolitan Museum of Art, initiating a detailed discussion of the Egyptian architectures that are exhibited in the museum: the tomb of Perneb, the column of Sahu-Re, the sarcophagus of Wennefer, and the temple of Dendur. Special emphasis was also placed on a comparative analysis between Egyptian and Greek sculptures, enhanced by research in the Greek and Roman sculptures of the Metropolitan Museum, and how figural representation reveals the different world-views of these cultures.

Assigned texts include:

Frankfort, Henri. The Art and Architecture of the Ancient Orient. New Haven; Yale University Press, 1996

### **ARCH 115 History of Architecture I semester II (required)**

The long Middle Ages, beginning with the emergence of temple-building traditions in India and China, and continuing with the extension of Roman traditions in Europe, are treated globally, with reference to the establishment of religious sites from Hawaii to Central America, Europe to the Far East.

The course now examines the architecture of the world through a study of ritual space: Islamic Mosques, Buddhist Monuments, Hindu Temples, Chinese Pagodas, Japanese Temples, and Hawaiian Heiaus, and examples from Pre-Columbian Native North America and South America. Students were required (in small groups) to prepare a spatial and written analysis of an assigned building for an oral presentation to the class. Works assigned included the Great Mosque in Cordoba, Spain, the Mosque-Madrassa of Sultan Hasan, Cairo, Egypt, the Horyu-ji, Monastery, Pagoda (Goju-no-to) and Kondo (Golden Hall) in Nara, Japan (late 7<sup>th</sup> c.), and the Temple Complex of Angkor Wat, Cambodia (12<sup>th</sup> Cen.).

The final exam required students to design a ritual space based on their analyses of architectural precedents, both western and non-western. "Programs" included an 11<sup>th</sup> century Egyptian palace complex referencing ancient Alghabid traditions, a Buddhist temple in 3<sup>rd</sup> -4<sup>th</sup> centuries.

Assigned texts included:

Kleiner, Fred S. and Christin J. Mamiya. Gardner's Art Through the Ages: Non-Western Perspectives. New York: Thomas Wadsworth, 2006.

Mitchell, George. The Hindu Temple. Chicago: University of Chicago Press, 1998.

### **ARCH 125 History of Architecture II semester I (required)**

The period conventionally understood as the “Renaissance” is seen as a broad-based transformation of building practices under the influence of the development of city-states and emerging national traditions. Special emphasis is placed on the Middle East (Iran, Turkey) as well as on the architecture of the west in Italy, France, Germany, and Britain.

The course now includes lectures and research on such topics as “Islamic Architecture in Ottoman Turkey”, “Islamic Architecture in Iran and India”, “China: The Pagoda, The Temple of Heaven, and The Forbidden City”, and “Japanese Palaces, Pagodas, and Temples.” Students are required to keep notebooks and select one monument each week for additional research and analytical drawings.

Assigned Textbooks included:

Kostof, Spiro. A History of Architecture: Settings and Rituals. 2nd ed. New York: Oxford University Press, 1995.

### **ARCH 125 History of Architecture II semester II (required)**

The modern period, embracing the emergence of western science, philosophy, and technology from the end of the 17<sup>th</sup> century, is seen in the context of the rise of nations, beginning with France, and increasing technological, economic, and geographical competition. The global struggle over resources and expanding markets, leading to the development of expansionist colonialism in the United States, India, China, and Africa, is the framework for case studies in the impact of modernization on traditional building practices, specifically in the context of Central Africa, Australasia, and India.

For their final projects, each student was required to analyze and compare a unique set of two houses, one of traditional origins and one modern architectural icon. The resulting projects, which included drawings, papers, and photographs, represented a broad range of non-western examples as one half of a pair, and included:

“Bernese Traditional Farmhouse and The Farnsworth House, Mies van der Rohe, Piano, Illinois”; “Woebley Yeoman Cruck-Framed House and The Vanna Venturi House by Robert Venturi”; “Tongkonan House of the Toraja Tribe and Maison de Verre by Pierre Chareau, Paris.”

Guest lectures on non-western architecture included:

Vikram Prakash, AIA, Professor, Department of Architecture, University of Washington, Partner, Verge Architecture: *Chandigarh in the Context of Indian Neo-Colonialism*

Steven Nelson, Associate Professor of African and African American Art History, UCLA

Assigned Textbooks included:

Ching, F.D.K., M.M. Jarzombek, V. Prakash. A Global History of Architecture. New Jersey: John Wiley & Sons, 2006.

### **ARCH 153 Town Planning (required)**

Non-western and global topics have also been incorporated into the curriculum for ARCH 153, Town Planning, including “Urban Space against the Background of Globalization”, “Studying the Global Network City in Spatial Formats”, “United Nations Habitat Reports and United Nations Refugee Camps”, “Oil States in Venezuela, Saudi Arabia, and South Africa”, and “Colonial Plantation Systems in Africa and South America.” In addition, during the 2007-2008 academic year, Town Planning hosted guest lectures by:

Guest lectures included:

Roberto Sanchez, Professor of Environmental Sciences, University of California, Riverside: *Panama Modern and the Canal Zone*

Toby Cumberbatch, Professor of Electrical Engineering, The Albert Nerken School of Engineering of The Cooper Union: *Ghana Mud-Block: Villages and Dogon Settlements*

Ward Verbakel, Professor, Department of Architecture, Urban Design and Regional Planning, Katholieke Universiteit Leuven: *French Colonial and Post-Colonial Design Strategies in Asian Cities*

David Gouveneur, Professor, Departments of Landscape Architecture and City and Regional Planning, School of Design, University of Pennsylvania: *Caracas Modern History + Medellin Slum Rehab Examples*

**Electives offered by the Faculty of Humanities and Social Sciences.** The Faculty of Humanities and Social Sciences offered significant courses that focused on non-western topics during the 2008-2009 academic year including: "Music Cultures of the World", "Native America", "Anthropology of Ritual", "The 21st Century Economy: Technology, Globalization and B.Growth", "Asian Painting", "African Art", "Global Cities", "Art and Architecture of the Ancient Near East", and "The Arts of China". Courses to be offered during the fall semester 2009 include: "Native America", "The Early Modern Atlantic World", and "Black Artists of the Americas". As every student in the school of architecture is required to complete at least 6 elective credits in courses offered by Faculty of Humanities and Social Sciences, these course offerings provide important opportunities for our students to study non-western topics in art and architecture and the broader culture with noted scholars in their respective fields.

### **2.1.3 Condition 12.29 Comprehensive Design**

*VTR March 27-31, 2004: "While the program has instituted curricular changes to address this previously unmet criterion -through the new integrative and comprehensive design studios- it is still a work in progress. The Visiting Team anticipates over the next several years, as the courses evolve and mature, the production of a comprehensive design should be addressed."*

### **Since the previous Site Visit**

*Focused Evaluation Report, 1 October 2007: The comprehensive design was clearly shown to be successful in the work that was exhibited as part of the ARCH 131 Design III. The student museum projects and the course syllabi presented were well done. The level of coordination between the building technology support courses and the design studio provide an excellent model for establishing a comprehensive design studio framework that should become even stronger over time.*

The third year has undertaken to consider the environment, its technology and building materials, as integral to the design of complex institutions, taking light, air, water, and their formal equivalents as the

foundations of a comprehensive art – architecture no longer seen as the form to which environmental and material concerns are added but as the design of the environment poetically considered.

1. The School of Architecture utilizes a model of a "synthetic, comprehensive" third year curriculum, in which the curriculum and assigned projects of the ARCH 132 Structures II, ARCH 134 Environmental Technology I, and ARCH 135 Building Technology courses are coordinated with the ARCH 131 Design III studio project. Instructors from the lecture classes are given studio assignments as part of their teaching appointments, participate in the studio as critics and serve on reviews, while the design problem in the studio serves as a basis for the final project in each of the associated classes. The supporting projects in the technologies courses stimulated and informed the development of each student's studio design project. Similarly, the use of the studio design projects as the source for study and development in the technologies courses brought increased commitment to the work in those classes.
2. Beginning in fall 2008, EVT I was expanded to be a three hour, three-credit course. This allows for the presentation of topics in power, lighting and conveying systems (previously addressed in EVT II in the fourth year of the curriculum) during the third year program, to more effectively consider all building systems in the comprehensive studio as potential determinates of architectural form.
3. A rigorous, synthetic analysis and design experience in the third year was achieved using the following programs since the previous visit:
  - 2004-05: Sport/ School
  - 2005-06: Pavilion/ Museum
  - 2006-07: Museum as type/ Museum at the Highline
  - 2007-08: Museum as type/ Museum at Madison Square/Flatiron
  - 2008-09: Projects after WWII/ Library
4. Anticipating the more explicit requirements of the new 2009 Conditions regarding comprehensive design, the dean will lead the third year studio during the 2009-2010 academic year.

## **Fall Semester 2008**

### **ARCH 131 Design III:**

During Fall Semester 2008, the 3<sup>rd</sup> Year Design Studio undertook the analysis of significant buildings designed and built during the twenty years following WWII, from 1945 to 1965. During that time, the architectural precepts established in the early years of 20<sup>th</sup> century modernism were already familiar, allowing for further invention and experimentation with spatial concepts, site, material and form.

Each student chose a project from a list, which included buildings by Le Corbusier, Alvar Aalto, Louis Kahn, Mies van der Rohe, Hans Scharoun, Frank Lloyd Wright, Eero Saarinen, Friedrich Kiesler and others. Following the meticulous documentation of each building, the students analyzed the spatial, tectonic, material and structural aspects of the projects in addition to their site conditions and other environmental considerations. The studio addressed *analysis* as a design project: it encouraged experimentation and the invention of a different methodology of examination. Each student was asked to develop a system of documentation and representation that was particularly appropriate to the chosen building. A creative design process was thus initiated by identifying analytic concepts in the each of the buildings; and then

carrying those concepts through a comprehensive series of drawings and models, letting them transform our familiar knowledge of each one of those structures.

### **ARCH 132 Structures II** (required)

Students were supported in the analysis of their selected building by identifying the overall structural strategy of the project and revealing critical elements and systems: column grid, beams, bearing wall, frame, arch, truss, etc.

### **ARCH 134 Environmental Technology I** (required)

Students were given assignments to identify environmental themes in their selected building. The assignments include the development of several “ideograms” that conceptually convey the ideas and systems at work in the museum.

As part of this course, students visited the SoundLab at Arup. The SoundLab is an auralisation tool designed by Arup that allows clients, architects, engineers and musicians to hear how different spaces perform acoustically and how architectural form shapes sound quality. This radical approach is the aural equivalent of visualization, and puts listening at the center of the acoustical design process. Following 15 years of research and development, including measuring many prestigious concert halls around the world, the SoundLab offers a unique facility for optimizing the acoustical quality of new designs. Raj Patel, Associate Principal with Arup Acoustics, presented a lecture to the class as part of the SoundLab visit.

### **ARCH 135 Building Technology** (required)

Students selected a detail from the building which embodied/revealed an important conceptual principle of the project and researched available drawings, or relevant practices, to fully draw the detail. After several iterations of redrawing the detail to understand it in three-dimensions, students were required to fabricate the detail at full scale, using actual materials whenever possible. Students worked in wood, steel, concrete and glass, (one student actually fired Aalto bricks), studying both “means and methods” as well as the relationship between function and design ideas.

Guest Lectures in Building Tech: Jon Maass, project manager with the Paratus Group: *Case Study: Glass, Steel & Concrete: The Toledo Art Museum's Glass Pavilion by SANAA*

## **Spring Semester 2009**

### **ARCH 131 Design III** (required):

The program given was a neighborhood branch library that also contains a specialized collection, including all the regular elements of the typical branch circulating library – books, journals and magazines, various audio and visual formats as well as terminals for consulting the internet. The library would also house a specialized collection of original material that does not circulate, requires special handling and storage, and will be the source for a regular program of public exhibitions. Thus the building will be used both by the general public and by a more restricted group of researchers who come to consult the special collections. It will also have a children's reading section. A detailed program was provided to the students with required areas for the following: entry, reception and control; circulating library of approximately 50,000 volumes, most of which are to be on shelves to be consulted directly by the public; periodical room; audio-visual

materials, acoustically isolated from the rest of the collections; special collections and exhibits gallery; small auditorium for lectures, presentations and special events to seat +/-150; outdoor terrace; two meeting rooms; offices for administrative staff; work room; collection storage; delivery; mechanical plant; toilet rooms for both sexes on all floors; elevators, public vertical circulation and two independent egress stairways.

While students were beginning to develop their projects, members of the studio team gave individual lectures on site (Rice), program organization and massing (Rustow), structures (O'Donnell), mechanical rooms (Raiji), and building envelope (Anderson).

Students discussed structural systems, environmental strategies and the envelope of their design project with the individual professor specializing in each area. Early in the spring semester, students were also assigned projects in ARCH132 Structures II, ARCH134 Environmental Technology, and ARCH 135 Building Technology that directly engaged their design projects.

### **ARCH 132 Structures II** (required)

In the beginning of the semester, students were assigned the design of the structure for an actual project. Students worked in groups to develop framing plans and to size structural elements. Students worked one-on-one with the faculty member teaching structures to develop a structural strategy and to resolve specific structural conditions in their individual design projects.

### **ARCH 134 EVT I** (required)

Students were required to present schematics of the environmental systems and technologies (conventional and passive systems as well as alternative energy systems) and to perform a LEED analysis of their project.

### **ARCH135 Building Technology** (required)

Each student was required to develop a section detail for his or her design project from roof to foundation, at a large scale. Each student began with a schematic sketch and developed the specifics of the building envelope as their design project was developed. This exercise challenged the students to make decisions about materials early in the design process, to investigate the significance of material and detail to the design concept, and to recognize the importance of iteration in the design process. Students were also asked to address issues of constructability in the development of detail.

Guest lecturers in Building Technologies included: Mark DuBois, AIA, Principal and co-founder of Ohlhausen DuBois Architects, who lectured on architectural concrete and structural glass as applied in his recent projects, including the American Institute of Architects award-winning Klein Residence in Santa Fe, New Mexico; Alexi Lukyanov, SITU Studios: *CNC: Digital Technology in Fabrication and Design-Build*

The class took field trips (once in the fall and once in the spring) to the site of The Cooper Union's new academic building to study the work in progress: stair framing, curtain wall and window wall installation, architectural metalwork, installation of pre-cast GRFC and GRFG panels, finish work, etc. The class was lead through the site by Ryan Murphy, a Project Manager with F. J. Sciamé, Inc., the project's construction managers, who presented the design issues, construction sequencing and "means and methods" of the work in progress and was available for questions following the site visit.

The class was also led on a walk-through of the adjacent neighborhood to study the façade details of several recently completed buildings by distinguished national and international architects.

#### **2.1.4 Condition 12.34 Professional Internship**

*VTR March 27-31, 2004: "This criterion is marked 'met' and 'not met' because while the material is well covered in the professional practice course, the students are not asked examination questions on the material."*

#### **Since the previous Site Visit**

*FER, 1 October 2007: ARCH 154 Professional Practice syllabus along with the overview presentation by instructor of this course covers the professional internship criterion very well.*

This course, redesigned and taught by Professor Michael Samuelian, AIA, AICP since the 2006-2007 academic year has been extremely successful. He continues to include lectures and discussions on the IDP in his syllabus, and questions that demonstrate students' understanding of the IDP program on his final exam. In surveys, a majority of current students report that they are not aware of the IDP requirements; beginning with the 2009-2010 academic year, Professor Samuelian will give a required lecture about the IDP as part of the third year "comprehensive year". Students will be encouraged to establish an IDP record while in school.

**Following 20 years of service to the school**, Professor Fred Chomowicz retired his position teaching Professional Practice at the end of spring semester 2006. Michael Samuelian, AIA, AICP, was appointed to teach the class beginning with the 2006-07 academic year. Professor Samuelian has had previous experience in both small and large architectural firms and with the Manhattan Office of the New York City Department of City Planning and is currently an associate with The Related Companies. The course is composed of two parts, "The Architect in Society", which focuses on issues and institutions in society or the community at large that architects must engage in the conception, design, and realization of a project, and "The Architect in the Office", which outlines the issues and professional structures that architects face in practice. As part of the course, students are required to attend a public hearing of the New York City Landmarks Preservation Commission or a meeting of a local Community Board, to research the Intern Development Program, the Americans with Disabilities Act, and New York City building codes, and to complete case studies focusing on architecture and the law.

Class meetings throughout the year were hosted in professional offices, including SHoP Architects, hosted by Coren Sharples, AIA, Partner; Beyer Blinder Belle Architects & Planners LLP, hosted by Neil Kittredge, AIA, Partner; Skidmore, Owings & Merrill LLP, hosted by TJ Gottesdiener, FAIA, Managing Partner; MADE LLC hosted by Ben Bishcoff, Partner; D'Aquino Monaco, hosted by Francine Monaco, RA, Principal; and Kohn Pedersen Fox Associates, hosted by Eugene Kohn, FAIA, Partner.

#### **2.1.5 Causes for Concern**

*VTR March 27-31, 2004: While much of the coursework in the areas of technology (structures, environmental controls, and building materials and methods), professional practice, and construction management is exemplary, the Visiting Team did not see this knowledge become manifest or impact the*

*design studio work as significantly as it could and should. ...the important curriculum changes that have occurred since the last visit have set in processes in motion to address this situation. ...*

The School of Architecture continues to strengthen the connections between the design studios and the required and elective coursework that, together, form the degree program.

In the third year, the relationship of the studio to the supporting coursework of that year is made explicit, and the school has continued to develop the “comprehensive, synthetic” model of Design III since the previous visit. New resident and adjunct faculty have been brought into the Design III studio team, and since 2006, the faculty for Building Technologies and Environmental Technologies have been given studio assignments as part of their teaching appointments. These faculty are continuously active in the design studio, and participate in the end-of term design reviews. Similarly, studio faculty will serve on the review of final projects in the supporting classes. Prior to the 2008-2009 academic year, required coursework in Environmental Technologies comprised a four-semester sequence; two semesters of two credits each in the third year curriculum, and two semesters of two credits each in the fourth year curriculum. It is now a two-semester sequence of three credits each, for a total of six credits in the third year curriculum. The syllabus was re-written to emphasize the relationship between environmental necessities and systems and architectural form. Bringing this expanded coursework into the third year of the curriculum allows students to incorporate this knowledge into projects earlier in the design studio sequence.

In the fourth year, students study architecture in its urban context, while advancing their knowledge of technological and environmental concerns. In order to encourage the in-depth investigation of urban architecture, and the role and physical manifestation of the institution in the city, Design IV is divided into two distinct studio experiences. One is devoted to the understanding of the architectural implications of urban design, studying the comparative architecture of cities as an introduction to the social and cultural implications of urban architecture; the other is an integrated study of a single institutional building on an urban site, requiring the development of a complex and heterogeneous program from an outline. The fourth year spring 2007 studio project investigated high-rise prototypes using the site of Governor’s Island in New York Harbor as a departure; for the spring 2008 semester, the students were assigned the program of Columbia University’s expansion into the West Harlem neighborhood of New York City. Both programs required an integration of student’s knowledge of planning (at the “master plan” and program level), structures, construction methods, and environmental strategies, for designs developed to a high degree of architectural resolution.

Throughout the curriculum, faculty now teach in both the classroom and the studio. The dean has given 8 faculty since 2004 reduced teaching assignments, including studio, in order to develop coursework, both required and elective. Students encounter faculty both as design critics and course lecturers, which facilitates the integration of knowledge gained in classroom and studio. Faculty in turn are given release time for the extensive research necessary to develop a new syllabus, and will in subsequent semesters bring this knowledge and perspective back into the design studio.

The Thesis requires students to develop an important architectural idea or complex of ideas through the means of research, the clear definition of a program, and a detailed architectural proposal. The Thesis affords students the opportunity to begin to define the nature of their own future practice. There is broad evidence of a critical integration of research and all the coursework of the professional curriculum, including technologies and building systems, into the design work in Thesis projects. Recent projects include *Housing and Urban farm in Mexico City*, which investigated rainwater harvesting in the development of a

housing prototype; *The Adaptability of Architecture to Drastic Environmental Changes*, which investigated the potential of architecture to mitigate environmental change; *Breathing Room*, which investigated issues of air pollution in urban environments and proposed a prototype building envelope which could also serve as an air filter; and a highly detailed proposal for a fully sustainable vineyard and winery following a detailed analysis of the desertification of the Mediterranean region.

## **2.2 Summary of Responses to Changes in the NAAB Conditions**

This Architecture Program Report follows the NAAB Conditions of Accreditation, 2004 Edition.

This APR follows the format of the Table of Contents of the NAAB conditions, as specified in the 2004 Conditions. The report as a whole contains many elements of a self study, including both information and analysis. Section 1.5 Program Self Assessment focuses on assessing progress toward achieving the articulated objectives of the two strategic plans developed by the school in the context of institutional planning efforts since 2001. These plans have served as important guides for the evolution of the school and its programs, and are presented in summary in this section. Although a presentation of the strengths and challenges are summarized here, they are elaborated in the APR as a whole.

All students and faculty are informed annually in writing of how to access the NAAB Student Performance Criteria on the NAAB website, as required in the 2004 Conditions (see 3.3.2).

The School of Architecture has worked with its Student Council and members of the faculty to develop continually evolving policies regarding the studio as a stimulating and supportive intellectual and creative environment. The school's principles and policies are addressed in section 3.5.

The library exceeds the requirement for a minimum of 5,000 volumes; please see the extensive report prepared by The Cooper Union Library Director, section 3.9, and the most recent statistical report included as appendix C.

The Cooper Union for the Advancement of Science and Art is accredited by the Middle States Commission on Higher Education; the most recent decennial re-accreditation visit was in April 2008. (see 3.11.1)

The Curriculum Committee has made numerous changes to the professional curriculum since the previous accreditation visit, in history, technologies, general studies and has change the year during which certain requirements are taken. The committee and faculty have discussed and approved the necessary adjustments to the curriculum to meet the NAAB course distribution requirements specified in the 2004 Conditions.

The school has completely revised its matrix to reflect the 34 Student Performance Criteria specified in the 2004 Conditions, and has worked with faculty teaching the affected classes to develop new syllabi as necessary to incorporate new material into their coursework. Criterion 15, Sustainable Design, is addressed at the level of the Institution, the program and individual classes. In 2008, The Cooper Union launched the Center for Sustainable Design as a resource for education, research and public understanding of the principles and methods of sustainability in all the design disciplines. This new institute will bring scholars to the school for public lectures and symposia and will also support research projects at the program level. The school defined "non-Western history, environmental ecology, sustainability, and

global studies in architectural practice" as important program goals in its 2007 planning report, and methods of sustainable design are explored in the studio and coursework of the comprehensive Third year. Criterion 27, Client Role in Architecture, is addressed explicitly in ARCH 154 Professional Practice, but also throughout the curriculum in the extensive discussions of program in the design studios, and through internships, work in professional offices, and discussions with visiting critics and lecturers (see also 3.7.2)

## **3. THE THIRTEEN CONDITIONS FOR ACCREDITATION**

### **3.1 Program Responses to the NAAB Perspectives**

#### **3.1.1 Architecture education and the academic context**

The multi-disciplinary nature of architectural practice demands an academic context that is fully responsive to interdisciplinary study, studio work and research, and that in turn draws on the special disciplinary expertise and insights of architecture for its own interdisciplinary strength. At The Cooper Union, the School of Architecture is especially fortunate to be placed in an academic context shaped by the special foci and interaction of two other professional schools, Art and Engineering, and the Faculty of the Humanities and Social Sciences, each of which contributes in important ways to the architectural program.

The School of Architecture, the smallest of the three schools, is funded by The Cooper Union, which administers its endowments, and also supports the Cooper Union Library and its membership in the library consortium (comprised of The Cooper Union, the New School University, and New York University), all information technologies facilities, and The Great Hall.

The School of Architecture began as a program within the School of Art and its continuing relationship with Art is enhanced by spatial proximity in the Foundation Building, where the architecture facilities are housed on the third and seventh floors; the shared shop facilities occupy the fourth floor, and shared specialized computing facilities occupy the fifth and seventh floors. There is significant, though informal, interaction between students in these shared facilities. The Great Hall is home to the major public programs of each of the schools as well as The Cooper Union and the Office of Continuing Education and Public Programs. Such varied programs of lectures, classes and events sponsored by the institution, or sponsored or co-sponsored with outside entities, allows the students immediate and spontaneous access to a wide range of professional and cultural events. The School of Architecture has co-sponsored major public events with the AIA New York, the Architectural League of New York, the Whitney Museum, the Museum of Modern Art, and the NYC Department of Planning.

While the three professional schools are autonomous academic units within The Cooper Union, they cooperate administratively at the level of the Academic Council, chaired by the president and comprised of the four academic deans, the vice president of business affairs, the vice president for external affairs, the dean of students, and the dean of admissions and records and is staffed by the director of operations. Academic cooperation is encouraged and developed at the deans' level by monthly meetings of the four academic deans chaired by the president. Collaboration takes place at the level of the faculty through representation at each other's faculty meetings, the library committee meetings, and on institution wide ad-hoc committees and work groups. Planning for the new academic building as well as preparing for the Middle States Self-Study and Strategic Plan engendered meetings involving all divisions of the institution for several years. An institution-wide Technology Committee is currently at work.

Each of the schools must satisfy their own accreditation boards, which shape, in some degree, their academic programs. Within those constraints, there are ample opportunities for students to take courses in programs outside their own. Architecture students have significant free-elective opportunities, and take elective courses offered by the School of Art in photography, film and video, public art, sculpture, and painting. Many courses in the Engineering School are open to architecture students, who have participated

in the interdisciplinary EID111 Design, Illusion and Reality, and courses on acoustics. For the last four years, architecture students have participated in the college's program in Ghana, established and run by a faculty member of the School of Engineering. The Faculty of the Humanities and Social Sciences serves students from all schools, providing courses where students intermix and share knowledge. Students of the School of Architecture in good academic standing can now develop a minor in one of four areas of the humanities and social sciences. Beyond this, individual and collective faculty initiatives encourage team-teaching across schools, the sharing of specialized technological facilities such as computer studios, laboratories, and shops, and via initiatives sponsored by the president. The associate dean and the chief technology officer hold regular meetings with their School of Art counterparts in order to coordinate the development and policies of shared digital facilities.

Faculty from the other schools and the Faculty of Humanities and Social Sciences often participate in interim and final review of student projects. Faculty from the School of Art participated in the review of the third year museum project (2007-08) and the dean of the Faculty of Humanities and Social Sciences participated in the review of the third year library project (2008-09).

Faculty are encouraged to contribute to the intellectual and social life of the school by inviting guest lecturers to their courses and studios (many of which are advertised and open to the whole school), inviting practicing professionals and critics to design reviews that are open to all students, and developing conferences and symposia which are sponsored by the school. The students' own lecture series is advertised to the whole school, and attracts many students from both Art and Engineering (see 3.7.2).

There is thus, throughout the school, a continuing effort to ensure that all constituencies of the school are actively and creatively involved in its academic life and governance.

### **3.1.2 Architecture education and the students**

The maintenance of an academic environment in which creative freedom and individual development are paramount continues to be a fundamental commitment of the School of Architecture. The 2004 VTR recognized that *"The students at The Cooper Union, selected solely on merit, form an active, dedicated, articulate, diverse and participatory student body committed to the program and the school"*.

Our students reflect a profession that is increasingly diverse and global in its practice, bringing to the school an awareness of the contemporary human condition in terms of both needs and aspirations. Despite a diversity of ethnicity, religion, age, financial resources, and geography, the valued spirit of community is very strong at the school and students are actively engaged in its support. The opportunity to study and live in New York City has a considerable influence upon students' understanding of society and culture.

The students are introduced to leadership roles in a number of formal and informal ways throughout their career in the school. The Governance of the School of Architecture provides for significant student participation in decision making at all levels. Each class elects three student representatives to the Student Council, a body that meets regularly with the dean and associate dean to discuss policy issues and issues relating to the health, welfare and intellectual development of the students. These representatives poll and meet with their constituencies in preparation for these meetings and then report results back to their respective classes. Student representatives (as selected by the council itself) also serve on the four of the standing committees of the faculty, participating in all discussions of policy and programs in the

committees. The student representative has a full vote. Three students serve as representatives to the faculty meetings, and vote at these meetings as well.

Students serve on the Student judiciary Committee, which reviews and adjudicates violations of The Cooper Union "Code of Fair Practice".

Students serve as monitors in the School of Architecture Computer Studio, maintaining the studio and providing support, managing out-put and identifying needed repairs. The two "head monitors" meet with the associate dean each semester to recommend hardware and software purchases, develop new policies, discuss adjustments to the facilities, and to assess how the studio can otherwise be improved to meet student needs. Similarly, students administer the School of Architecture Study Collection, maintaining the room for quiet study and research and seeking (and successfully securing!) funding for new acquisitions.

Students organize their own lecture series, presenting 6-7 lectures each semester by emerging and distinguished professionals, designers in all fields, artists and academics. Students select the speakers, develop publicity, administer invitations and hospitality for visits, and prepare carefully written introductions. This work and personal contact with the visiting lecturers affords a valuable educational experience in itself, with insights and experience into administrative procedures, and the wider professional world.

The Student Council is responsible for establishing and administering the process by which students claim their studio workplaces and design the studio layout. The council will adjudicate minor disagreements in the studio, and assist in maintaining a collegial environment.

During the 2008-2009 academic year, the Student Council initiated a lecture series to invite faculty of the school to present "lunch time" lectures of their own work or writing, followed by an open reception/lunch. These lectures proved to be extremely popular, with over half the student body and faculty attending the lectures.

Students participate in the establishment of their individual and collective learning agendas in a number of ways, and at all levels of the school. In each design studio, while overall guidelines and goals are set by the instructors, students are given the opportunity to develop their individual approaches, alternative propositions, and design solutions. This takes place at every stage of the design problem: in the analysis of precedents, where students may explore a wide range of analytical approaches, and representational techniques; in the investigation of the nature and form of programs, (for example, in the third and fourth year studios) students are encouraged to question the relationship between activities, space, and technologies and to generate alternative programmatic statements; in the design phases, students are asked to develop criteria for, and individually select, sites, as well as explore their own approaches to design. In classes, students develop their own research projects within the subject matter of the class, and present and discuss these projects as part of the class meetings.

On a formal level, there is student representation on the Curriculum Committee, where all curricula initiatives and reforms are proposed and developed prior to being brought to the faculty for discussion and action. The opinions of the students are further sought regularly in the bi-annual meetings of each class with the dean and associate dean, and at the regular meetings of the Student Council with the dean and associate dean. The suggestions brought forward at these meetings are given full consideration.

Students are also free to develop their individual interests in the wide range of elective courses, offered in architecture, in the Schools of Art and Engineering, and by the Faculty of Humanities and Social Sciences. The Bachelor of Architecture curriculum provides more free elective credits than any other program in the college.

The central place of the design studio in the culture of the school encourages an openness to the expression and exploration of cultural difference at all levels; older and more experienced students mentor and encourage younger students; the milieu itself embraces and encourages the expression of cultural differences, and the atmosphere, as well as the social code of the school, emphasizes respect for individual difference, while the values of diversity and the dignity of the individual is stressed throughout the school. Group research and work in teams is common at all levels, beginning in the first year, which in 2008 required students to reach consensus as a class on certain parts of the project; and in Thesis where the task of individual self-development is enhanced by group exercises. Throughout the school students will often draw on their own cultural heritage in the framing of their designs, and the development of class assignments.

Student government has a tradition at The Cooper Union that dates back almost a century. Each school has its own student council whose members also serve on the Joint Student Council. Through its subcommittees, the JAC facilitates the development of new student groups to reflect the changing interests of the student population. Political and social questions are debated in occasional school-wide conferences. The Student Handbook includes the "Code of Fair Practice" which codifies student rights and responsibilities. The administration and faculty of the school work with the students through their elected representatives to establish an environment conducive to free and open learning and discussion. This allows for students from every background to excel.

Students are given support in graduate school and research fellowship and grant applications, both within the school and at the Center for Writing and Language Arts administered by the Faculty of Humanities and Social Sciences and also in the Office of Student Services. Since 2004, eight School of Architecture graduates have won Fulbright Fellowships, and graduates have been accepted to graduate programs at Harvard, Princeton, Yale, the University of Pennsylvania and other prestigious institutions. Two graduates have been named as fellows to the American Academy in Rome, and one to The British School [Academy] at Rome.

### **3.1.3 Architecture education and registration**

Students are prepared for the transition to internship and licensure both formally through the coursework of ARCH 154 Professional Practice, and informally through contact with faculty in active practice in every year of the curriculum. All current full time faculty are licensed professionals; a total of sixteen members of the faculty are registered architects, and three are professional engineers. During their five years of study prior to obtaining their degree, most of our students will spend some time in a professional office. Professional Practice addresses the range of issues that the student will face upon entering the profession by examining the "Architect in Society" in the first semester and the "Architect in the Office" in the second and final semester of study. This structure permits a focus first on the "externalities" which future architects must face in regard to the client, the community, ethics, regulations and the law. In the second semester there is a focus on the issues pertinent to an architect in the office environment, including state licensure requirements, the Architecture Registration Exam (ARE) and the requirements of the Intern Development Program (IDP).

Following the history of the profession and the history of architecture registration in the first semester of ARCH 154, the IDP and contemporary requirements of registration are discussed in the second semester, including how to establish an IDP record, the internship categories, and the issues to consider when selecting both a mentor and a supervisor. The school informally helps students find mentors and has been successful in introducing students to alumni willing to act as mentors. As recommended by the 2007 planning report, the school will begin the process of establishing a more formal mentorship program during the 2009-2010 academic year.

Students in Professional Practice are encouraged to register for the IDP immediately and to begin the internship process as soon as possible. In surveys, current students note that they are not sufficiently aware of the IDP requirements; during the 2009-2010 academic year, the faculty member teaching professional practice will give a required lecture about the IDP as part of the third year “comprehensive year”. Students will be encouraged to establish an IDP record after their third year of study.

The architect’s responsibility for professional conduct is presented, and professional ethics are discussed and debated at length, as are the role of the architect in the community and the architect’s role in society. All students are required to attend a public meeting (community board, landmarks, zoning, etc.) and document their observations in order to see first hand how the design process outside of school can be contentious and oftentimes dramatic; a dynamic collaboration between architects, clients and an increasingly engaged public. Occasionally, students actually engage the process: recently a committee of our local community board asked the school if students might review a set of plans for a project that required community board review. Students met with the committee, helped its members to “read” the drawings and explained to the community board the potential impact of the proposed project on neighboring residences. Through this first hand experience with the public review process, students learn the architect’s capacity to engage the public, and affect change.

Architects work under increasing pressure to advance, compete and stay relevant in today’s challenging environment, and ethics are discussed at length. In particular, the Supreme Court case of *Mardarosian v. AIA/Auerbach* is studied as a cornerstone of the current AIA Code of Ethics and Conduct. *Mardarosian* challenges students to develop a position on determining the “right thing to do” in a situation. This case study also reveals how professional ethics adapt to new cultural norms. The School of Architecture and the program as a whole foster the development of personal ethics in all matters, a foundation for future challenges balancing the interests of the client, the public and one’s own creative vision.

Office visits are an important part of the Professional Practice class, and students find them extremely valuable. From small, boutique firms to large corporate offices and design build start-ups, students meet and talk to practitioners who are constantly adapting to an ever changing professional and regulatory environment.

All graduating students are invited to join an online forum to receive updates on the profession from the professor teaching Professional Practice. In addition, archived materials from the course are available to the young graduates as a reference. The professor of Professional Practice is available to all recent graduates as a resource for both Internships and mentors and has been successful in pairing recent graduates with professional opportunities, giving advice on early-career issues and finding mentors for graduates when necessary.

This summer, the school sent 229 of its 253 graduates from 1999-2008 a short e-mail questionnaire about their progress toward licensure (we did not have email contact information for the remaining alumni). We received 149 responses; of that number, 17 had become licensed, an additional 11 were in the process of taking the licensing exam, and an additional 43 were in the IDP program. Of the alumni who responded, 50 were attending, or had attended, graduate school, delaying the time to successful licensure and registration. Over 70% of alumni who responded to the 2009 NAAB Survey noted that they had “become or were seeking to become a registered architect.”

### 3.1.4 Architecture education and the profession

Issues: Roles and responsibilities in context of increasing cultural diversity  
Evolution of client and regulatory demands  
Expanding knowledge base  
Engagement of school with professional community  
Connection between practice and research  
Awareness of the contribution of other disciplines  
Tension between service and creativity  
Ethics of practice

The engagement of The Cooper Union’s architecture program with the profession is robust and extensive. The professional community, both local and at large, is a constant presence in almost every aspect of a student’s experience at The Cooper Union, from specific courses in the curriculum and the professional affiliations of the faculty, to lectures and symposia, exhibitions and publications, to students’ independent research endeavors and their summer or vacation employ. In the course of the five years of study that lead to the professional degree, each cooper student engages the professional community in both the breadth and the depth of his or her academic experience.

The dynamic between the school and the profession is at once supportive and critical. There is a fundamental understanding that as a pre-professional program The Cooper Union has an obligation to ‘prepare’ students for the roles they will be asked to fill as they move into practice. At the same time, there is a recognition that the profession is continually in flux and that roles within it change constantly and that therefore a true ‘preparation’ for the profession cannot be based solely on those models of practice that happen to exist at any given moment. Furthermore, it is in the academic setting that received ideas about practice can be questioned and alternative models can be hypothesized and researched. The role of the academic program must in part be that of the way-finder or guide that helps to explore future working models for the profession that conventional practice cannot alone provide, precisely because its primary emphasis is necessarily on production.

There are four essential ‘sites’ of interaction between the profession and the school:

#### *Within the Curriculum*

The history and issues of practice are the direct subject of much of the required curriculum in every year of study at Cooper. Thus, there are specific courses on professional practice, on construction management and on the specialties of many of the associated supporting disciplines, notably, structural engineering, environmental systems and building technology as well as issues of sustainability, which are emphasized throughout the curriculum. Furthermore, parts of this same material are directly integrated into the four years of design studios, which, with thesis, make up the heart of the pedagogical program. This is

particularly true of the 3<sup>rd</sup> year comprehensive studio in which the entire two-semester sequence is structured to emphasize and explore the integration of the associated disciplines as critical components in the process of design.

Required and elective seminars such as ARCH 185 Crossings, ARCH 190 Structures Elective, and ARCH 125 Advanced Topics, use the incomparable resource of the New York City professional community to bring an array of practicing professionals to the school in the support of a focused topic of study.

The profession also serves as an indirect resource in the coursework required of students, with questions of practice, production processes and actual buildings used constantly as references and historical examples. Thus, in the analysis portion of studio courses, students prepare the complete documentation of an existing building from diverse sources, including as-built drawings, historical photographs and textual material; often, when possible, this will entail contacts and exchanges with the offices of the architects who designed the building in question. More generally, professional publications, printed and on-line reference materials and professional websites are systematically used to complement more conventional pedagogical resources in both studios and seminars.

Finally, and most importantly, there is constant contact with the professional community through the faculty, over 60% of whom are practitioners in a variety of settings, from large corporate firms, to smaller collaborative or group practices to one or two person offices. Put another way, the professional practice of architecture is actively represented by faculty throughout every part of the curriculum and the pedagogical method of the majority of Cooper's professors is informed by their professional activity. Moreover, members of the professional community outside of Cooper are continually invited to the school as jurors in design studio and external lecturers in seminar courses.

#### *In Extra-curricular Activities*

Students at Cooper have a continuous exposure to the profession and an engagement with members of the professional community through "in house" and public lectures and a regular program of exhibitions, symposia and round-table discussions. In addition to the school-sponsored lecture series, several seminar courses organize public lectures with distinguished practitioners each year, for example the Feltman Seminars on Light. The AIA Center for Architecture is within walking distance of the school, and students take advantage of its almost daily programs. The School of Architecture participates in the center's annual exhibition of student work each fall.

#### *In Individual Research*

Many students at Cooper undertake individual research projects in conjunction with travel and/or a variety of competitive fellowships. Often such research is preparatory to the final year of thesis work and informs the thesis subject. In helping students to formulate their proposals for such structured independent study, faculty advisors regularly place students in contact with members of the professional community – local, national and international – to support and to critique a particular line of inquiry. These external professional resources supplement those that are provided by the school itself and help to create a fuller understanding of the essential role that research plays in practice and throughout a professional career.

#### *In Internships and Employment*

In the course of five years at Cooper, virtually every student will have had some period of internship or employ in a local architectural office (or a firm engaged in some related field such as construction management). Over the years the school has established through both its alumni and its faculty a wide

network of contacts who are instrumental in providing work for almost all students who seek it. This runs the gamut from 3 months of summer full-time employment, to part-time work during a portion of the school year, to short, intensive periods of assistance on competitions, exhibitions or *charrettes*. These experiences give students direct contact with the professional community and an exposure to the varied modalities of contemporary practice. Such contact reinforces an understanding of the practice of architecture as a collaborative, multi-disciplinary enterprise and a familiarity with the wide range of roles and responsibilities within it.

In sum, the profession is intimately tied to both the theoretical pedagogical program at the School of Architecture and to its practical application within and beyond the confines of the school. Contacts with the professional community are an integral part of students' academic careers and collegial interactions beyond the academic setting are facilitated and encouraged. At the same time, the program seeks to develop a critical stance with respect to contemporary practice and to explore a theorization of existing practices of architectural production to discover innovative approaches that ultimately may lead to their transformation.

### **3.1.5 Architecture education and society**

Studio design problems at all levels foster the students' understanding of the social role of architecture and urban design in a wide range of contexts. From the outset of the program, as is appropriate for a school located in New York City, students are asked to consider the complex relations of urban fabric and architectural construction in the city.

For several years, the First Year studio has introduced students to the potential uses of the once abandoned, and now transformed High Line, in a design problem that fosters knowledge of physical structure, pedestrian and vehicular circulation, diverse programs, and their public interaction. The relationship between an individual "user", and the shared action of a community were explored and manifested architecturally. Second Year programs develop basic knowledge of environmental and community concerns, joined to an investigation of the geophysical properties of site and the principles of site design of site design and "master plan". Third Year studios concentrate on the design of small urban public institutions, from museums, art galleries, to libraries and community clinics, in ways that expand students' awareness of complex programmatic concerns, the consideration of myriad issues of urban life that affect architecture and the important role of cultural and intellectual institutions in public life. Fourth Year studios are almost always focused on questions that confront urban design at the architectural scale, ranging in past years from the investigation of the response of cities to natural and man-made catastrophes, the nature of towers and their impact on public urban space, to planning strategies for a new public university, and proposals for its broad range of individual programs (using Columbia University's plans for expansion into West Harlem as a starting point). In the fifth year Thesis, a semester of detailed research followed by a semester of design allows the individual student to examine a program that on a number of different scales proposes an architectural intervention that has a direct relationship to social and environmental concerns. The wide variety of subjects studied in this year reflects the students' diverse backgrounds, their concern for both environmental and cultural sustainability and their understanding of the potential for architecture to transform and enhance community. Topics from the impact of global warming on the fragile ecology of the Mediterranean and the design of ecologically sustainable vineyards in Crete, to the re-use of the infamous Law Courts in Johannesburg for educational research and language teaching, to a proposal for housing for *La Mina* in Barcelona, are presented to the school as examples of socially and environmentally responsible programs, and equally importantly, as paradigms of projects where architecture can and should make a difference.

The Saturday Program affords students the opportunity to develop a program and curriculum for teaching architecture to New York City high school students. Five to six Cooper Union students teach day long classes each Saturday from October to April; many of the program teachers attended the Saturday program as high-school students. The program has been instrumental in the successful applications of many of its graduates to architecture schools, including City College, Pratt, and The Cooper Union.

## **3.2 Program Self-Assessment Procedures**

### **3.2.1 Description of the school's self assessment process**

Formal self-assessment processes occur at both the level of the schools and of the institution. The three schools and the Faculty of Humanities and Social Sciences have independent governances, and program assessment lies fundamentally within each school and their accrediting boards.

At the Institutional level, the Academic Council, which meets monthly, is responsible for an overview of academic accountability and review processes. The deans make annual reports to the president, and, since the 2007-2008 academic year, annual budget submissions must be accompanied by a narrative that demonstrates how resource allocations are aligned with institutional and program goals. The institution also has a full-time director of assessment and innovation, with the responsibility for supporting and extending assessment processes throughout the school. The director reports back to the deans on the results of annual exit surveys and alumni surveys performed every five years.

At ten-year intervals the mandatory institutional self study required by the Middle States Commission on Higher Education serves to provide a comprehensive view wherein the viability of institutional mission, goals, strategic planning, etc. may be carefully reviewed and evaluated. While the Middle States Commission does not assess the academic programs, its concerns regarding institutional review do impact constructively upon the professional programs, particularly in terms of assessment, communication, accountability and the allocation of financial resources.

The most recent Middle States visit occurred in April 2008. This visit provided the opportunity for an institution wide assessment process that engaged administration, faculty, staff, students and alumni through five work groups (institutional resources; leadership, governance and administration; student admissions and retention and student services; faculty and educational offerings; related educational activities) and a steering committee representing all constituencies. The School of Architecture used the Middle States process as an opportunity to review, and comprehensively assess progress on the goals of its own 2007 Planning Report. New goals were articulated in support of the school's mission in which NAAB perspectives are clearly evident.

Extensive demographic material is produced annually by The Office of Admissions and Records. Additional information is provided by the Office of Student Services, including Financial Aid statistics, senior surveys and employment surveys. This data is useful at both the school and institutional levels and contributes greatly in the overall self-assessment process.

The formal procedure for on-going assessment within the School of Architecture is as follows:

### *Governance, Committee Structure and Faculty Meetings*

The Governance of The Irwin S. Chanin School of Architecture is a long standing document that establishes five standing committees: the Administrative Committee, the Curriculum Committee, the Admissions Committee, the Admissions Committee (graduate) and the Committee on Academic Standards. Each standing committee includes student representation, and the student representative has a full vote. Additional ad hoc committees and work groups may be established by the faculty to deal with matters not specifically assigned to the standing committees. These committees and work groups, standing and ad hoc, incorporate a responsibility for self-assessment within their areas of purview. Committees report directly to the faculty via the faculty meeting. The governance requires that the faculty meets at least once each semester. Additional meetings may be called by the dean or the faculty in accordance with the provisions of the governance. Recent institution wide ad-hoc committees have included the New Academic Building Committee, Middle States Self Study Workgroup, the Middle States Self Study Steering Committee, and the Technology Committee; School of Architecture representation on these workgroup and committees have served to advance the goals of the school in space allocation and the development of shared facilities.

Assessment and development of the curriculum continues on an ongoing basis through the Curriculum Committee. The Curriculum Committee consists of the associate dean (who is the permanent chair), two resident faculty, one adjunct faculty representative, and one student representative. Ex-officio members include one alumni representative, the dean of admissions and records and the president. The currently elected committee includes representation from the faculty teaching design, history/ theory and technologies courses. The governance requires that certain recommendations from the Curriculum Committee be reviewed and voted on by the Administrative Committee before being sent to the faculty for discussion and vote. This extends the faculty review of changes to the curricular prior to consideration by the full faculty. Minor curricular adjustments recommended by the Curriculum Committee can be implemented administratively.

### *Curriculum Assessment Plan*

During the 2002-2003 academic year, the Curriculum Committee developed an assessment plan, which organized all required courses of the curriculum according to five broad program objectives in support of the mission. The accomplishments expected for the successful completion of each course as well as the methods by which such accomplishments might be assessed, were defined by individual faculty responsible for each course. Accomplishments were cross-referenced with NAAB Student Performance Criteria. Following the Middle States Self study, the curriculum committee is in the process of updating the curriculum assessment plan to reflect the goals and objectives of the new plan.

### *Meetings Between the Deans and Students*

The dean and associate dean meet with the Student Council (comprised of three elected representative from each class) twice each semester. The council establishes an agenda, and issues of curriculum, individual courses and teaching, policy, facilities and procedures are all freely discussed, and student concerns are recorded in meeting notes. The deans also use these meetings to bring institutional news or developments to the students through their representatives. There are additional meetings with each individual class at the end of each semester. The associate dean also has frequent meetings with student representatives. As necessary, student concerns are brought to the appropriate faculty committee or directly to the faculty for consideration. Students have three representatives on the voting faculty.

### *Faculty, Alumni and Student Surveys*

The School of Architecture periodically surveys the faculty, alumni and students for their assessment of the program's overall curriculum and learning context, as outlined in the NAAB perspectives. The completed surveys are reviewed by the dean and the associate dean and concerns are brought to the appropriate faculty committee for consideration. The most recent survey was done at the end of the 2008-2009 academic year (see 3.2.2.).

The director of assessment and innovation administers "exit" surveys to each graduating class, and the results of these surveys are reported to the school. This broad "satisfaction" survey does not align directly with the NAAB perspectives, and few students of the School of Architecture participate, but it is nonetheless very useful toward program development.

#### *Architecture at Cooper Newsletter*

This newsletter, launched at the end of the 2006-2007 academic year, serves as a comprehensive review of the studio sequence, public programs, and faculty activities of the previous academic year. It serves to both celebrate and assess the progress of the school in meeting its goals.

#### *The Annual Exhibition of Student Work*

Following the end of each academic year, The Cooper Union presents its annual exhibition of student work, which includes work from all three schools. School of Architecture faculty and students work together with the Architecture Archive to curate, design and install the exhibition. All thesis work, and a broad selection of the work of all other design studios is represented. The exhibition occupies the classrooms, lobbies and public spaces of the third and seventh floors, and on alternate years the Houghton Gallery, almost 10,000 square feet of exhibition space. The exhibition is open to the public and opening receptions are attended by many alumni and local professionals. The exhibition is a celebration of the work of the year as well as an important occasion in the assessment of student work by the school, the institution, the profession and public at large.

#### *Course Questionnaires*

With the help of the director of assessment and innovation, the Curriculum Committee developed questionnaires for use in student assessment of individual courses. These questionnaires were used for the first time at the end of the spring 2003 semester. Each completed questionnaire is reviewed by the dean and is made available to the individual faculty. The dean then discusses the completed questionnaire with the individual faculty. The dean includes consideration of student comments on the questionnaires in reviewing faculty teaching assignments. The Cooper Union Federation of College Teachers does not permit full-time faculty to participate in any evaluation procedure developed or administered by the school or institution. Full-time faculty members may develop and administer course evaluations directly with their students.

(See 3.6.2 for the questionnaire used for the studio courses and lecture/seminar courses.)

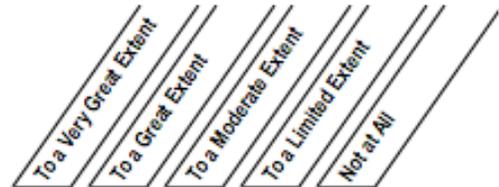
### **3.2.2 Faculty's, student's, and graduates' assessment of the curriculum and learning context as outlined in the NAAB perspectives**

The School of Architecture recently surveyed faculty, current students and alumni regarding the program's relationship to the NAAB perspectives. The results of the survey follow:

**THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION**

**NAAB 2009 Student Questionnaire Results**

TOTAL STUDENTS : 59



**1.1 Architecture Education and the Academic Context**

The program establishes academic and professional standards for both faculty and students.

49%	32%	14%	2%	
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The program supports interaction with other programs in the institution.

14%	24%	34%	20%	5%
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The program fosters the contribution of students to the governance and the intellectual and social life of the institution.

34%	34%	20%	7%	2%
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The program fosters the contribution of faculty and administrators to the governance and the intellectual and social life of the institution.

27%	46%	20%	3%	
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The institution supports the program in terms of intellectual resources and personnel.

42%	34%	17%	2%	
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**1.2 Architecture Education and the Students**

Students are encouraged to assume leadership roles in school and later in the profession.

37%	22%	27%	8%	
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Students participate in establishing their individual and collective learning agendas.

54%	22%	15%	5%	2%
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Students are encouraged to cooperate with, assist, share decision making with, and respect students who may be different from

51%	24%	19%	5%	
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Students have access to the critical information needed to shape their futures.

41%	29%	22%	3%	
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Students have exposure to the national and international context of practice and the work of the allied design disciplines.

24%	29%	32%	14%	
-----	-----	-----	-----	--

Student diversity, distinctiveness, self-worth, and dignity are nurtured by the program.

31%	34%	24%	3%	5%
-----	-----	-----	----	----

**1.3 Architecture Education and Registration**

Students have exposure to internship requirements, including knowledge of the national Internship Development Program (IDP) and continuing

10%	31%	25%	25%	2%
-----	-----	-----	-----	----

Students understand their responsibility for professional conduct.

25%	32%	34%	5%	
-----	-----	-----	----	--

#### 1.4 Architecture Education and the Profession

The program engages the professional community in the life of the school.

20%	41%	24%	12%	
-----	-----	-----	-----	--

Students gain an awareness of the need to advance their knowledge of architecture through a lifetime of practice and research.

56%	24%	10%	5%	
-----	-----	-----	----	--

Students develop an appreciation of the diverse and collaborative roles assumed by architects in practice.

32%	37%	19%	8%	
-----	-----	-----	----	--

Students develop an understanding of and respect for the roles and responsibilities of the associated disciplines.

32%	34%	24%	7%	
-----	-----	-----	----	--

Students learn to reconcile the conflicts between architects' obligations to their clients, the public and the demands of the creative enterprise.

15%	31%	34%	14%	2%
-----	-----	-----	-----	----

Students acquire the ethics for upholding the integrity of the profession.

44%	29%	17%	8%	
-----	-----	-----	----	--

#### 1.5 Architecture Education and Society

Students gain an informed understanding of architecture as a social art.

51%	25%	15%	7%	
-----	-----	-----	----	--

Students gain an informed understanding of the complex processes involved in the course of shaping the built environment.

56%	24%	14%	5%	
-----	-----	-----	----	--

The program provides an emphasis on knowledge that can mitigate social and environmental problems.

34%	24%	29%	12%	
-----	-----	-----	-----	--

Students gain an understanding of the ethical implications of decisions involving the built environment.

37%	24%	22%	15%	
-----	-----	-----	-----	--

The program nurtures a climate of civic engagement, including a commitment to professional and public service.

24%	32%	20%	20%	
-----	-----	-----	-----	--

**THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION**

**NAAB 2009 Faculty Questionnaire Results**

TOTAL FACULTY : 31



**1.1 Architecture Education and the Academic Context**

The program establishes academic and professional standards for both faculty and students.

55%	32%	6%		
-----	-----	----	--	--

The program supports interaction with other programs in the institution.

10%	26%	32%	19%	3%
-----	-----	-----	-----	----

The program fosters the contribution of students to the governance and the intellectual and social life of the institution.

45%	35%	10%	3%	
-----	-----	-----	----	--

The program fosters the contribution of faculty and administrators to the governance and the intellectual and social life of the institution.

42%	23%	23%	6%	
-----	-----	-----	----	--

The institution supports the program in terms of intellectual resources and personnel.

42%	32%	10%	10%	
-----	-----	-----	-----	--

**1.2 Architecture Education and the Students**

Students are encouraged to assume leadership roles in school and later in the profession.

55%	26%	13%	3%	
-----	-----	-----	----	--

Students participate in establishing their individual and collective learning agendas.

39%	32%	10%	10%	
-----	-----	-----	-----	--

Students are encouraged to cooperate with, assist, share decision making with, and respect students who may be different from themselves.

42%	42%	10%		
-----	-----	-----	--	--

Students have access to the critical information needed to shape their futures.

39%	42%	6%	3%	
-----	-----	----	----	--

Students have exposure to the national and international context of practice and the work of the allied design disciplines.

39%	39%	16%	3%	
-----	-----	-----	----	--

Student diversity, distinctiveness, self-worth, and dignity are nurtured by the program.

71%	19%	6%		
-----	-----	----	--	--

**1.3 Architecture Education and Registration**

Students have exposure to internship requirements, including knowledge of the national Internship Development Program (IDP) and continuing

16%	42%	19%		
-----	-----	-----	--	--

Students understand their responsibility for professional conduct.

42%	26%	19%		
-----	-----	-----	--	--

#### 1.4 Architecture Education and the Profession

The program engages the professional community in the life of the school.

23%	55%	16%	3%	
-----	-----	-----	----	--

Students gain an awareness of the need to advance their knowledge of architecture through a lifetime of practice and research.

52%	32%	13%		
-----	-----	-----	--	--

Students develop an appreciation of the diverse and collaborative roles assumed by architects in practice.

48%	32%	13%		
-----	-----	-----	--	--

Students develop an understanding of and respect for the roles and responsibilities of the associated disciplines.

35%	39%	23%		
-----	-----	-----	--	--

Students learn to reconcile the conflicts between architects' obligations to their clients, the public and the demands of the creative enterprise.

26%	32%	32%	3%	
-----	-----	-----	----	--

Students acquire the ethics for upholding the integrity of the profession.

58%	23%	13%		
-----	-----	-----	--	--

#### 1.5 Architecture Education and Society

Students gain an informed understanding of architecture as a social art.

58%	26%	10%		
-----	-----	-----	--	--

Students gain an informed understanding of the complex processes involved in the course of shaping the built environment.

58%	26%	13%		
-----	-----	-----	--	--

The program provides an emphasis on knowledge that can mitigate social and environmental problems.

32%	42%	16%	3%	
-----	-----	-----	----	--

Students gain an understanding of the ethical implications of decisions involving the built environment.

45%	29%	23%		
-----	-----	-----	--	--

The program nurtures a climate of civic engagement, including a commitment to professional and public service.

39%	32%	19%	6%	
-----	-----	-----	----	--

**THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION**

**NAAB 2009-2010 Accreditation Questionnaire  
1999-2008 Graduates**

TOTAL ALUMNI: 43



**1.1 Architecture Education and the Academic Context**

The program establishes academic and professional standards for both faculty and students.

42%	37%	21%		
-----	-----	-----	--	--

The program supports interaction with other programs in the institution.

12%	35%	28%	21%	2%
-----	-----	-----	-----	----

The program fosters the contribution of students to the governance and the intellectual and social life of the institution.

23%	49%	21%	2%	5%
-----	-----	-----	----	----

The program fosters the contribution of faculty and administrators to the governance and the intellectual and social life of the institution.

40%	33%	19%		
-----	-----	-----	--	--

The institution supports the program in terms of intellectual resources and personnel.

44%	44%	9%	2%	
-----	-----	----	----	--

**1.2 Architecture Education and the Students**

Students are encouraged to assume leadership roles in school and later in the profession.

37%	28%	23%	2%	9%
-----	-----	-----	----	----

Students participate in establishing their individual and collective learning agendas.

44%	19%	19%	14%	5%
-----	-----	-----	-----	----

Students are encouraged to cooperate with, assist, share decision making with, and respect students who may be different from themselves.

40%	37%	19%	2%	2%
-----	-----	-----	----	----

Students have access to the critical information needed to shape their futures.

37%	44%	14%	5%	
-----	-----	-----	----	--

Students have exposure to the national and international context of practice and the work of the allied design disciplines.

33%	33%	28%	5%	2%
-----	-----	-----	----	----

Student diversity, distinctiveness, self-worth, and dignity are nurtured by the program.

47%	28%	14%	9%	2%
-----	-----	-----	----	----

**1.3 Architecture Education and Registration**

Students have exposure to internship requirements, including knowledge of the national Internship Development Program (IDP) and continuing

12%	21%	37%	23%	9%
-----	-----	-----	-----	----

Students understand their responsibility for professional conduct.

23%	40%	30%	7%	2%
-----	-----	-----	----	----

#### 1.4 Architecture Education and the Profession

The program engages the professional community in the life of the school.

26%	28%	33%	14%	2%
-----	-----	-----	-----	----

Students gain an awareness of the need to advance their knowledge of architecture through a lifetime of practice and research.

47%	35%	14%	7%	
-----	-----	-----	----	--

Students develop an appreciation of the diverse and collaborative roles assumed by architects in practice.

28%	30%	35%	7%	2%
-----	-----	-----	----	----

Students develop an understanding of and respect for the roles and responsibilities of the associated disciplines.

28%	35%	26%	12%	2%
-----	-----	-----	-----	----

Students learn to reconcile the conflicts between architects' obligations to their clients, the public and the demands of the creative enterprise.

14%	21%	53%	7%	9%
-----	-----	-----	----	----

Students acquire the ethics for upholding the integrity of the profession.

42%	30%	23%	2%	5%
-----	-----	-----	----	----

#### 1.5 Architecture Education and Society

Students gain an informed understanding of architecture as a social art.

77%	12%	5%	2%	
-----	-----	----	----	--

Students gain an informed understanding of the complex processes involved in the course of shaping the built environment.

49%	30%	12%	5%	2%
-----	-----	-----	----	----

The program provides an emphasis on knowledge that can mitigate social and environmental problems.

26%	47%	14%	9%	
-----	-----	-----	----	--

Students gain an understanding of the ethical implications of decisions involving the built environment.

40%	28%	26%	7%	
-----	-----	-----	----	--

The program nurtures a climate of civic engagement, including a commitment to professional and public service.

35%	26%	30%	5%	2%
-----	-----	-----	----	----

### 3.2.3 Institutional requirements for self-assessment

#### *Budget Process*

As a result of the Middle States Self Study, each school (as well as each budgetary unit), is required to link its requested budget to clearly articulated goals drawn from The Cooper Union Strategic Plan 2007-2012, as well as the school's own goals and objectives. The four main goals of The Cooper Union plan can be summarized as:

- Ensure faculty strength by appropriately expanding the size of the faculty and by providing effective, ongoing professional development for faculty members.
- Continuously renew academic programs and curricula, while expanding the focus on interdisciplinary and international studies.
- Develop an information technology infrastructure that can evolve to meet all of the institution's academic and administrative needs.
- Establish the administrative, financial and physical resources necessary to sustain The Cooper Union's academic and philanthropic mission over the long term.

As the 2007 institutional plan had integrated the individual plans of the academic and administrative units, and established common priorities, the School of Architecture plan and the institutional plan are well aligned.

#### *Dean's Report to the President*

At the end of each academic year, the Dean provides the president with an annual report that details the accomplishments of the year, describes new or continuing challenges, and outlines plans for the coming academic year.

#### *Annual Work Review*

All "exempt" (non-union) administrators are required to participate in an annual work review, which involves the employee's own assessment of his/her activities and accomplishments of the year, including progress towards stated program goals and challenges inhibiting progress.

### 3.2.4 Other pertinent information

**The School of Architecture Archive** is a unique and extremely important resource for the school both pedagogically and for the continual assessment of the development of its curriculum.

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.

In 1970 dean John Hejduk and Roger Canon, AR'70, established a methodology to document student work for the publication *Education of An Architect: A Point of View*, which coincided with an exhibition of the same name held at the Museum of Modern Art in 1971. Supported by a recommendation of the 1980 NAAB Visiting Team, the Archive was established in 1983. Presently, Steven Hillyer, AR'90, is the Director. The Archive is staffed by two additional part-time associates: Barbara Choit, the Collections Assistant, and Sara Jones, the Special Projects Assistant.

Each summer, the Archive documents models and drawings selected by faculty from the annual End of Year Exhibition, comprised of student work produced in the design studios of all five years of the curriculum. This digital and photographic record, which includes written studio programs and student texts supporting their design work, forms a comprehensive, didactic history of the school's pedagogy. These materials can subsequently be used for publications, for the presentation of work to accrediting bodies such as the NAAB, and the Middle States Commission on Higher Education, and for the internal assessment of the design curriculum over time. The Archive has a collection of student work that dates back to 1964.

The Archive is responsible for assembling materials for Site Visits conducted by accreditation agencies, including the NAAB, which normally take place every six years. This includes the presentation of the documentation of design projects and samples of coursework for all required and elective classes that comprise the Bachelor of Architecture degree. The Archive also coordinates a digital exhibition of student and faculty work which is then used to update the school's website.

The archive curates three exhibition spaces:

#### **Hallway Exhibitions**

The Archive presents exhibitions during the school year from its various collections, as well as other works that might be of interest to the students. These materials are exhibited in the third floor hallway, the main thoroughfare of the School of Architecture.

#### **Houghton Gallery Exhibitions**

The School of Architecture presents major public exhibitions in the Arthur A. Houghton Jr. Gallery. Over the years, the works of architects, painters, and faculty of the school have been exhibited. The Archive handles all details relating to curating and installing the work. Recent Exhibitions presented by the school include *Architects Draw – Freeing the Hand* (2008), and *By Way of Observation* (2008).

#### **Annual End of Year Exhibitions**

At the end of every spring semester, the architecture studios and classrooms are emptied and transformed into exhibition space. The Archive prepares these spaces and supports the needs of the students and the studio faculty as they curate and install the work.

#### **Publications**

Since 1971, twenty-seven books have been published by the Irwin S. Chanin School of Architecture. Many of these titles have been produced in conjunction with an exhibition or lecture series. *Waterworks – The Architecture and Engineering of the New York City Water Supply* was co-published with MIT Press in 2006. For more information on the School of Architecture Archive see section 3.8.1.

### **3.3 Public Information**

### 3.3.1 A description of the degree program as it appears in university catalogs and other institutionally authorized materials

From the 2008-2009 Course Catalog of The Cooper Union:

Pg. 5 “**Accreditation:** The Cooper Union is accredited by the Middle States association of Colleges and Schools; all of the degree programs are registered with the New York State Education Department. In addition, the program leading to the degree bachelor of architecture is accredited by the National Architectural Accrediting Board, the program leading to the degree bachelor of fine arts is accredited by... etc.”

The exact language of *Appendix A* in the NAAB Conditions for Accreditation follows on the same page in a subsequent paragraph under the same heading. (See 2008-2009 Course Catalog, page 5.)

### 3.3.2 Evidence that faculty members and incoming students have been informed of how to access the NAAB Conditions for Accreditation (including the Student Performance Criteria, on the NAAB website.

Each year, a memo is sent to all new and returning students and all new and returning faculty as part of the school’s “summer mailing” with instructions on how to access the NAAB Conditions, including the Student Performance Criteria, on the NAAB website.

A copy of the current memo follows:

**August 2009**

**TO:**

**All Faculty and Students**

**The Irwin S. Chanin School of Architecture of The Cooper Union**

**As required by the NAAB (National Architectural Accrediting Board), we take this opportunity to inform you how to access the NAAB CONDITIONS FOR ACCREDITATION as well as the STUDENT PERFORMANCE CRITERIA on the NAAB website.**

**For the CONDITIONS**

**Go to: [http://www.naab.org/accreditation/2004\\_Conditions.aspx](http://www.naab.org/accreditation/2004_Conditions.aspx)**

**For the STUDENT PERFORMANCE CRITERIA**

**Go to: [http://www.naab.org/accreditation/2004\\_Conditions\\_2.aspx](http://www.naab.org/accreditation/2004_Conditions_2.aspx)  
(Section 3.13)**

**Thank you for your consideration.**

### 3.4 Social Equity

### **3.4.1 The criteria and procedures used to achieve equity and diversity in faculty appointments, reappointments, compensation and promotions**

The School of Architecture Program provides all faculty, students and staff -irrespective of race, ethnicity, creed, national origin, gender, age, physical ability, marital status, veteran status or sexual orientation- with equitable access to a caring and supportive educational environment in which to learn, teach and work, continuing a fundamental commitment by the School to humanism as a foundation for architectural production.

Both the reputation of the school's program and the location of The Cooper Union in the heart of Manhattan, prompts a steady flow of highly qualified applicants of diverse backgrounds for available teaching positions at the school. Because the New York metropolitan area is a center of architectural production as well as home to six schools of architecture, it is an extraordinary resource for new faculty. The school actively seeks to identify, recruit and retain faculty from underrepresented minorities, through its close association with many schools of architecture as well as local professional organizations.

Concerns and reports about any type of discrimination at The Cooper Union may be made without fear of reprisal. Anyone found to be engaging in any type of unlawful discrimination may be subject to disciplinary action up to and including termination.

### **3.4.2 The criteria and procedures used to achieve equity and diversity in student admissions, advancement, retention and graduation**

The Cooper Union policy of an all-scholarship program offers unique and extraordinary educational opportunity in professional disciplines for all students, irrespective of economic, cultural, ethnic or religious background.

From the Dean of Admissions and Records:

"The Office of Admissions and Records and Registrar utilizes a recruitment program that involves a variety of methods to ensure that students of diverse economic, racial and ethnic backgrounds are connected to The Cooper Union.

A number of professional staff members conduct personal high school visits in and around the New York City metropolitan-area, attend hundreds of local, regional and national college fairs, organize receptions for prospective and admitted students in addition to sponsoring events for guidance and school counselors. Much contact with our prospective students is done via email, telecounseling and other internet-based tools.

We also use the Enrollment Planning Service software issued by The College Board to assess our recruitment geomarkets and make revisions when necessary. This ensures that we visit with students that live in low-income areas. Our staff members have developed relationships with several Community Based Organizations (CBO) to make certain that underrepresented minority students are aware of Cooper Union's School of Architecture.

Cooper Union's Saturday Outreach Program is another vehicle that exposes high school students of diverse backgrounds to the fields of art, design, architecture, writing and other disciplines critical in

order to successfully pursue a higher education. Every year, many students from the Saturday Outreach Program apply to our Schools of Architecture and Art and several are offered admission and ultimately enroll at Cooper Union.”

The Admissions Committee, one of four standing committees of the School of Architecture, determines the process by which students are offered admission to the school. The Committee, which includes representation from the Resident Faculty, the Adjunct Faculty and a student representation, with an alumnus/ae serving ex-officio, reviews all applications and reaches consensus on applicants to be offered admission. A completed application includes a student’s full academic record, standardized test scores, optional letters of recommendation and personal statement and a completed “Home Test”. The Home Test, which is reviewed annually and revised as necessary by the Committee, presents a series of questions/propositions to which the applicant makes visual and written responses, revealing analytical, conceptual and creative skills. The completed application is reviewed and assessed as a whole.

The Admissions Committee does not review portfolio work in addition to the home test for freshman applicants. In this way, the school discounts the admissions advantage of students with the financial resources to attend private art and architecture classes or receive portfolio preparation and “guidance”.

Although the 2004 VTR noted the diversity of our student body, increasing the number of students from underrepresented minorities remains a challenge, as is the case in the profession at large and most schools of architecture. While the participation of African-American and Caribbean-American students remains low, there has been greater success in increasing the participation of Latino/Hispanic students. The Cooper Union remains steadfast and pro-active in efforts to increase ethnic diversity as well as the participation of women and students from traditionally underrepresented socio-economic groups through continually expanding outreach. The School of Architecture is committed to supporting the Office of Admissions in this important effort, and members of the Admissions Committee will engage more actively in recruitment efforts in the 2009-2010 academic year. Nonetheless, ethnic or gender quotas or ratios are not applied during the applicant review process.

**Full Time Matriculated Students by Racial and Ethnic Heritage**

Year	African American/ Caribbean	Native American	Asian/Philippine/ Pacific Island	Latino/Hispanic
2008-09	4.3%	<1%	11.3%	9.2%
2007-08	3.6%	-	16%	15%
2006-07	8%	-	25%	9%
2005-06	4%	-	16%	5%
2004-05	3%	-	17%	5%

These "self reported" statistics for racial and ethnic heritage, as required by the federal government and most regulatory agencies and reporting standards, do not include international students. If international

students were included, the percentage of underrepresented minorities for the 2008-2009 academic year would be as follows:

African American/Caribbean: 6.4%  
 Native American: <1%  
 Asian/Philippine/Pacific Island: 19.8%  
 Latino/Hispanic: 13.4%

**Full Time Matriculated Students by Gender**

Year	Male	Female
08-09	56%	44%
07-08	58%	42%
06-07	54%	46%
05-06	58%	42%
04-05	58%	42%

In addition to the **Full-tuition Scholarship** received by all matriculated students and visiting students gaining entrance to the School, students with demonstrated need are offered additional assistance as the budget may allow. The Cooper Union is not always able to match the financial aid offers of other institutions, and one of the goals of the 2007-2012 institutional strategic plan is to expand financial aid; over the past accreditation cycle, there has been a slight decline in students eligible for financial aid.

**Financial Aid 2004-2005 to 2008-2009 Academic Years**

Years	% of Students	Average Package	Average Grants	Average Self Help (Loans & Work-Study)
2008-09	31%	\$6,006.00	\$3,136.00	\$2,870.00
2007-08	32%	\$6,407.00	\$3,039.00	\$3,368.00
2006-07	35%	\$5,735.00	\$3,330.00	\$2,405.00
2005-06	33%	\$6,472.00	\$3,147.00	\$3,324.00
2004-05	34%	\$5,341.00	\$3,105.00	\$2,236.00

**Scholarships and awards**

Largely through the efforts of the administrative associate, the School of Architecture makes every effort to be aware of external scholarship and award opportunities and to bring this information to eligible students. The school forwards such information to the Office of Student Services, posts notices on the school's bulletin board, makes use of e-mail or, when required, nominates students and supports their application process. In addition to the annual commencement awards, students have received the following awards since the previous site visit:

AIA NY Chapter Heritage Ball: 3 awards

KPF Traveling Fellowship: 1 award  
RTKL Traveling Fellowship: 1 award  
SOM Traveling Fellowship: 1 finalist  
Burt L. Stern Award, Lotos Club Foundation: 5 awards  
Construction Management Association of America: 3 awards  
AIA Brooklyn Scholarship Award: 5 awards  
AIA NY Foundation: 6 awards  
AIA AAF: 1 award  
New York Society of Architects Fred L. Liebmann Book Award: 5 awards

### **3.4.3 A description of the means by which faculty, students and staff are given access to the formation of policies and procedures, including curriculum review and program development**

The Governance of School of Architecture establishes the means by which faculty and students engage in the evolution of policies and procedures in the school. The Governance was first adopted by the faculty in 1981 and has been amended periodically as conditions within the School, the Cooper Union or throughout the greater academic community have required. The Governance was last amended by faculty vote in 2006 to provide for a new Admissions Committee for the graduate program. The Governance is held in very high regard by the faculty as a concise and effective social and legal document, providing a framework within which debate and change can be ordered.

The Governance establishes five standing committees: the Administrative Committee, the Admissions Committee, the Admissions Committee (graduate), the Curriculum Committee and the Committee on Academic Standards. All committees specify representation from both the resident and adjunct faculties as well as students and include various ex-officio representatives from the other schools, the institutional administration and alumni. All voting members have an equal vote. The membership of the Architecture Faculty consists of the dean, associate dean, all resident faculty, three elected members of the adjunct faculty, three elected student representatives and one Alumni representative. The faculty is required to hold a regular meeting each semester at which a 50% quorum is required for any vote. A special meeting of the faculty may be called "on petition to the Chair by three members of the Faculty", affording students and faculty the ability to petition for a meeting of the faculty for "consideration of any subject stated in the petition". In practice, the faculty normally meets at least twice each semester. In addition, the Dean will call meetings of the entire teaching faculty as a collegial whole to discuss issues or new developments in the school. This structure affords faculty and students alike with a significant formal voice in all policy matters to be discussed and determined within the school.

More than 85% of architecture students vote in their student government elections. The Student Council consists of three student representative from each class, elected by their constituents. Assignments for representatives to serve on the faculty and standing committees are then determined within the Student Council.

The dean and associate dean meet with each class of students at least once each semester. Issues of curriculum, individual courses and teaching, policy, facilities and procedures are all discussed as students request, and student concerns are recorded in meeting notes. The associate dean also has frequent meetings with student representatives. Student concerns are then brought to the appropriate committee or directly to the Faculty for consideration.

The non-teaching administrative staff does not have representation or a vote on standing committees or at faculty meetings, although the director of the School of Architecture Archive is invited to attend the meetings of the faculty. The staff does participate in administrative committees such as the institutional Safety Committee and Commencement Committee, and ad-hoc meetings to develop institutional procedures, such as registration and scheduling. Staff can also affect institutional policy through their representation by The Union @ Cooper Union, a member of the NYSUT/AFT. At the program level, the staff meets frequently with both the dean and the associate dean, and are actively engaged in policy development through day-to-day discussions on all matters that affect the school. Additionally, the associate dean will discuss curriculum changes under consideration with the administrative associate, who can offer insight into issues that may affect smooth implementation of such changes. Turnover in the staff is extremely low (the administrative associate and the secretary share over 35 years of service between them); as such they can offer sound and seasoned advice to the administration.

### **3.5 Studio Culture**

Central to maintaining a creative environment for intellectual investigation and intuitive exploration are the shared design and computer studio spaces on the third and seventh floors of The Foundation Building.

In the studios, students work together as a community of individuals. Here, students and faculty from all years engage in a process of rigorous inquiry, discussion and critique, freely sharing knowledge, ideas and methodologies. Students study the principles and works of Architecture that have contributed to the betterment of the human condition in the development of their own projects. Students of the upper years serve as mentors for the lower years. Diversity and balance are critical values in generating an academic ambiance where humanistic ideals and ethical views serve as a constant reference for individual growth and development. The social and intellectual environment thus created is considered a vital part of the students' experience at The Cooper Union. Students are required to be present in studio for all hours that their Design studio meets, and to develop their work in the Studio.

Students must be aware of and observe all policies and conditions for the use of the studios, including hours of access. Studio use policies and responsibilities are distributed at the beginning of each academic year. The school does not support the idea of continual 24-hour studio access. Although in previous years, students have advocated for 24-hour access throughout the year, with more students living distant from campus, and the school permitting extended access during the final two weeks of the semester, there has been wide support among student for the current policy on access. Studios are generally open Monday to Thursday 8AM to 2 PM, Friday and Saturday 8AM to midnight, and Sunday from noon until 2AM.

Night monitors, generally School of Art alumni, are present in the school after 10PM to provide support to students working late in the studios, and to ensure compliance with policies particularly regarding student health and safety. As recommended by the Student Council in 2004, students who violate studio policies and conditions are fined after the second infraction.

The Student Council is generally responsible for supporting a collegial environment in the studio, and for bringing problems that may emerge to the attention of faculty or the administration. The school is small, and most conflicts are resolved quickly and respectfully among the students themselves.

One of the stated goals of the 2007 planning report was to provide greater coordination among faculty regarding the scheduling of final reviews and due dates for other coursework. The dean now schedules final reviews in consultation with the faculty, in consideration of other curriculum requirements, and communicates with the other deans (especially the dean of Humanities and Social Sciences) regarding end-of-term reviews.

See section 4.2 for the school's studio culture policy.

## **3.6 Human Resources**

### **3.6.1 Description of the students' educational backgrounds and the degree program's selectivity, retention, and time-to-graduation rates since the last accreditation visit**

Acceptance to all the programs of The Cooper Union is based solely on merit and the young men and women who enter The Cooper Union are promising and creative scholars. Students seek out The Cooper Union in anticipation of a peer group unequalled in passion, focus, analytical skill and imagination, to join a community of equals, committed to intellectual growth, freedom of thought and creative expression. They value The Cooper Union's promise of exceptional professional development in architecture, art and engineering and the opportunity to engage intensely in the fabric of life of one of the great urban centers of this time.

Students may apply to the School of Architecture as freshman or students with advanced standing (transfer students). About two thirds of each freshman class enroll directly after high school. The remaining students are applicants with some post-secondary education, and occasionally a baccalaureate degree.

In order to gain admission to the School of Architecture, an applicant must demonstrate not only a strong academic background but also the ability to represent ideas visually through our home test. Since this exam's content and questions change yearly, students cannot prepare or be coached in advance. The Office of Admissions along with the School of Architecture Admissions Committee believes that the home test allows us to find motivated, highly creative students who may not demonstrate traditional academic strengths, yet have a great potential to succeed at The Cooper Union.

Students applying for advanced standing (transfer students) submit a portfolio of work in addition to a completed application, post-secondary transcripts, etc. The Admissions Committee determines the studio placement of transfer students with the offer of admission; this placement is final.

Since the home test is a significant factor in determining admission, standardized test scores are not overused. The applications of underrepresented minority students are often given first consideration through their work on the home test.

Optimal enrollment in the School of Architecture is approximately 150 students with 30 students in each year of design. Enrollment since the last accreditation visit is as follows:

2008-2009: 141 undergraduate, 7 graduate

2007-2008: 139 undergraduate  
 2006-2007: 141 undergraduate  
 2005-2006: 148 undergraduate  
 2004-2005: 145 undergraduate

**School of Architecture - Selectivity**

	2004	2005	2006	2007	2008
Applications	543	529	631	578	735
Admitted	19	32	24	23	26
Percentage Admitted	4%	6%	4%	4%	4%
Deposited	19	31	23	21	25
Yield Percentage	100%	97%	96%	91%	96%

**School of Architecture - Retention and Graduation Rates**

	2004	2005	2006	2007	2008
First Year Retention	Fall 2003-Fall 2004 20/22 (91%)	Fall 2004-Fall 2005 27/28 (96%)	Fall 2005-Fall 2006 27/30 (90%)	Fall 2006-Fall 2007 28/30 (93%)	Fall 2007-Fall 2008 23/28 (82%)
5 year graduation rate (on-time)	18/34 (53%)	12/23 (52%)	26/34 (77%)	25/30 (83%)	14/27 (52%)
6 year graduation rate (within one additional year)	21/34 (62%)	14/23 (61%)	28/34 (82%)	26/30 (87%)	22/27 (82%)

It should be noted that students in good academic standing are permitted to request a one year "leave of absence" for work, travel or foreign study, and are generally granted permission for the leave. This extends the "graduation rate" of many students in good academic standing to six years.

As an undergraduate program accepting two-thirds of its entering class directly from high school, advising is offered to students who may find themselves reconsidering the personal benefits of a professional program. Occasionally, students will apply for admission as a transfer student to the School of Engineering or the School of Art. The associate dean works with her counterpart in the School of Engineering to advise students and support such applications as appropriate. Similarly, students who wish to transfer to another program for another course of study are given consideration in completing their study in the School of Architecture (for example, the student may be given permission to withdraw from the design studio to enroll in other coursework), and support in their application to other programs.

**School of Architecture Admits - Geographic Profile**

	2004	2005	2006	2007	2008
New York City	37%	52%	43%	24%	28%
Other, New York State	5%	10%	13%	14%	16%
New Jersey	5%	6%	9%	5%	8%
Other	53%	32%	35%	57%	52%

### **School of Architecture Admits - Academic Profile**

	2004	2005	2006	2007	2008
Median HS Average	90-94.9	90-94.9	90-94.9	90-94.9	90-94.9
Median SAT Reasoning	600-690	600-690	500-590	600-690	600-690
Median SAT Math	600-690	600-690	600-690	600-690	600-690

### **3.6.2 Description of distribution of effort between teaching and other responsibilities of each faculty member and evidence that students evaluate individual courses for both teaching effectiveness and course content**

There are currently 3 full-time faculty, all of whom are tenured. (The dean, though appointed with tenure, is not a member of the full time faculty because of his administrative appointment). Two of the full time faculty are registered architects, and one is a professional engineer. All full-time faculty are represented by The Cooper Union Federation of College Teachers, a local chapter of the New York State Teachers Union/American Federation of Teachers. A full time appointment is 12 hours per week as defined by the CUFACT agreement, and allows at least two free days to pursue professional and/or scholarly work. There are currently 11 proportional-time faculty. Proportional-time faculty are not tenured, but generally receive long-term appointments of three to five years, and receive health and retirement benefits. All current resident faculty maintain active professional or creative practices in addition to their teaching commitments. Adjunct faculty generally receive yearly appointments and teach one course. In May 2009, the part-time faculty of The Cooper Union voted to establish and be represented by a local chapter of the NYSTU/AFT.

All full-time and proportional-time faculty, as members of the resident faculty, attend and have a vote at faculty meetings. Most resident faculty serve on one of the five standing committees, as elected by their colleagues, and are expected to offer appropriate academic guidance to individual students upon request. Adjunct faculty elect three representatives to serve as voting members of the faculty and are also elected by the faculty to the adjunct position on each of the four standing committees. Most adjunct faculty will make time available for academic guidance when requested.

Institutional responsibilities of resident faculty include representation at the Faculty Meetings and Curriculum Committees of the Faculty of Humanities and Social Sciences, and special institutional ad hoc committees that may require representation from time to time, for example the Middle States Steering Committee, and the institutional Technology Committee.

All faculty of the school contribute considerable time and effort organizing and installing the extensive annual exhibition of student work throughout approximately 10,000 square feet of the Foundation Building. This show, open to the public, has been mounted annually at The Cooper Union since 1859, and is an

important and valued tradition of the school. It also serves as a means to annually review the evolving pedagogy of the school by students, alumni and the profession and public at large.

The Curriculum Committee developed questionnaires for use in student assessment of individual courses. These questionnaires were used for the first time at the end of the spring 2003 semester. The Cooper Union Federation of College Teachers does not permit full-time faculty to participate in any evaluation procedure developed or administered by the school or institution. Full-time faculty members may develop and administer course evaluations directly with their students.

Blank questionnaires used for the studio courses and lecture/seminar courses follow:

**THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION  
ASSESSMENT OF COURSES SPRING 2009: STUDIO COURSES**

**COURSE NAME AND NUMBER:**

**Please assess how this course has contributed to your academic progress. Use the following code in the box provided at each question and add comments as you may wish:**

**N/A, Not Applicable 1. Not At All 2. To A Limited Extent 3. To A Moderate Extent 4. To A Great Extent  
5. To A Very Great Extent**

The goals, expectations and requirements of the studio were clearly presented.	
Knowledge and skills acquired in other courses were useful in this studio.	
Discussion and questions were effectively stimulated as part of the structure of the studio.	
Adequate time is given to articulate the topics proposed by the studio.	
Readings, technologies, and information resources for additional study of the topics and issues addressed were offered as part of the studio.	
This studio has improved your desire and ability to independently research the topics and issues addressed.	
The studio presented questions and issues informative to your understanding of the practice of architecture.	

**Additional comments. Use the reverse side of the sheet as necessary.**

**THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE OF THE COOPER UNION  
ASSESSMENT OF COURSES SPRING 2009: LECTURE/SEMINAR COURSES**

**COURSE NAME AND NUMBER:**

**Please assess how this course has contributed to your academic progress. Use the following code in the box provided at each question and add comments as you may wish:**

**N/A, Not Applicable 1. Not At All 2. To A Limited Extent 3. To A Moderate Extent 4. To A Great Extent  
5. To A Very Great Extent**

The scope and the depth of the subject matter to be covered in this course were clear and clearly presented.	
The goals, expectations and requirements of the course were clearly presented.	
Knowledge and skills acquired in other courses were useful in addressing the new topics covered in this course.	
Solid knowledge of the subject matter covered in this course has been acquired as well as the ability to discuss these issues in academic and professional contexts.	
Discussion and questions were effectively stimulated as part of the structure of the class.	
Adequate time is given in class to each topic to be covered by the course.	
The reading assignments were clearly articulated in relation to both the scope and the goals of the course.	
Writing, homework, study or sketch projects were commensurate with the scope of the course and curriculum requirements.	
Readings, technologies, and information resources for additional study of the topics and issues addressed were offered as part of the course.	
This course has improved your desire and ability to independently research the topics and issues addressed.	
The course presented questions and issues which expand your body of references in relation to the design studio.	
The course presented questions and issues informative to your understanding of the practice of architecture.	

**Additional comments: Use the reverse side of the sheet as necessary**

Please see attachment 3.6.2 for the details of the distribution of effort between teaching and other responsibilities of each faculty member.

### 3.6.3 Faculty-student ratios for studios of all design levels

A "team teaching" model is used for design studio assignments: Architectonics, Design II through Design IV and Thesis. All students of a given year (approximately 30 students) work on the same design project with a team of 3 to 4 resident and adjunct faculty who together define the program of the project, set the schedule and requirements, discuss student progress and determine the individual student's final grade. Most studios involve some group work for at least part of the semester. Studio faculty frequently meet with students outside of class hours.

Faculty/student ratios in the design studios for the 2008/2009 academic year are as follows:

Courses	FALL 2008			SPRING 2009		
	Students	Faculty		Students	Faculty	
		Number	Total Hours		Number	Total Hours
ARCH 111 Architectonics	30	4	24	30	4	21
ARCH 121 Design II	28	3	26	28	4	31
ARCH 131 Design III	26	5	23	26	6	25
ARCH 141 Design IV	26	4	32	26	3	29
ARCH 151 Thesis	29	3	19	29	4*	23*

\* Includes one visiting lecturer on an honorarium basis.

### 3.6.4 Description of distribution of effort between administrative and other responsibilities for each administrative position

The administration of The Irwin S. Chanin School of Architecture consists of the Dean, Anthony Vidler and the Associate Dean, Elizabeth O'Donnell. With their respective teaching appointments, the dean and associate dean are full-time positions. The deans, supported by the administrative staff, are formally linked to the resident and adjunct faculties and student body through the committee structure as defined by the governance. Unique issues or problems may be dealt with by establishing ad hoc committees. Both the dean and associate dean practice an "open door" policy and with offices adjacent to the studios, much discussion regarding issues that arise on a day-to-day basis is carried on in an informal manner with faculty, students and staff, with discussion and final determinations achieved through the committees. Special meetings of the faculty may be called "on petition to the Chair by three members of the Faculty" or on the request of the president.

By governance the dean is chairman of both the Faculty and the Administrative Committee and is an ex-officio member of the remaining standing committees.

Institution-wide issues are addressed in the Academic Council, which meets monthly. The council is comprised of the president, the four academic deans, the vice president of business affairs, the vice president for external affairs, the dean of students, and the dean of admissions and records and the director of operations. The council's function is to serve as a policy and planning forum with oversight responsibilities. Informal discussions and meetings also play an important role in maintaining institutional standards and cohesion. The president meets with the four academic deans on a monthly basis to discuss issues related to the individual programs and curricula.

The budget is the province of the dean, vice president of business affairs, president and the board of trustees. The salaries of full time faculty, as bargaining unit members, are negotiated by the institution and the representatives of The Cooper Union Federation of College Teachers. The dean, in consultation with the associate dean and senior members of the faculty, makes teaching assignments. Adjunct personnel decisions, including salary determinations, are the prerogative of the dean acting in consultation with the faculty. In May 2009, the part time faculty voted to establish and be represented by a local chapter of the New York State United Teachers/American Federation of Teachers. Non-exempt full time and part time staff are represented by The Union @ Cooper Union, also a member the NYSUT/AFT.

The position of dean requires participation in many academic, ceremonial and social gatherings and events of the school and the Institution including the end of term design reviews, the opening reception of the end of the year show, and the annual graduation exercises held in the historic Great Hall. The celebratory spirit that pervades commencement is a reflection of The Cooper Union's dedication to architecture and creative education.

The dean meets frequently with members of the extended national and international architectural community in his role as an educator and representative of the school. The dean also lectures frequently and will generally be invited to at least two symposia and give several additional lectures in the New York metropolitan area each year. The dean maintains close contact with the school while traveling, and the associate dean carries on the direction of the activities of the school in his absence. In addition, the dean continues to publish extensively. Faculty and students look to the dean of the school and his contributions to architecture as prime examples of a commitment both to the leadership of the school and the importance of life-long scholarship and creative work.

The dean generally teaches one seminar course each year and is a member of the thesis studio team. Other responsibilities of the dean include arranging special seminars and lectures for students, overseeing exhibitions and publications of the school, and inviting professors and critics to visit and lecture in the school.

In accordance with the governance, the associate dean is permanent chair of the Curriculum Committee, and may be elected to other standing or ad-hoc committees. The associate dean is a member of the institutional Exhibitions Committee, the Curriculum Chairs work group, and the Foundation Building construction work group. The associate dean is responsible for student academic advisement, the approval of grade changes, leaves of absence and other special circumstances and personal counseling (which is done in consultation with the dean of students in instances of severe difficulties). Additional responsibilities include oversight of daily operations of the School of Architecture office, including staff, budget and special capital budgets, facilities planning and coordination, oversight of public programs, coordination with the School of Architecture Archive, review and response to relevant correspondence,

standing in for the dean at various meetings within and outside the school as needed, and participation in the many events and gatherings of the school and institution.

The associate dean generally teaches one seminar each year, and is a member of the third year comprehensive studio team. The associate dean also edits the annual School of Architecture newsletter. She is a registered architect and continues to practice professionally.

### **3.6.5 Description of the distribution of effort between administration and other responsibilities for each staff position**

The Office of The School of Architecture, located near the studios, is staffed by one full-time administrative associate, one full-time secretary, one part time assistant to the deans, and part time student help. Regular duties performed include maintaining correspondence, budget and accounting records, student records, supplies and equipment, committee reports, supervising academic schedules, day-to-day activities, the dean's calendars, registration procedures, commencement activities, etc.

The office is the first stop for information and assistance for both students and faculty, and the administrative associate and secretary are both extremely committed to and knowledgeable about the school and the institution as a whole. The staff is responsible for receiving guests, planning special events, and fostering good communication and friendly relations within the School of Architecture and The Cooper Union as a whole, as well as with our alumni and the public. The staff works closely with the deans in all academic and administrative matters.

*Administrative associate (full time, exempt):* The Administrative Associate Monica Shapiro coordinates class schedules both within the school and with other divisions of the institution, she performs credit audits for every student in the school twice each year to monitor student progress in meeting degree requirements, and reviews and approves course selections prior to registrations (students out of sequence or behind in requirements are referred to the associate dean). She prepares faculty appointment letters and coordinates visa applications when necessary; assists in accreditation requirements, maintains networks between alumni in practice seeking help and students (or other alumni) seeking employment, alerts students to scholarship and fellowship opportunities, schedules classes and provides daily student support. She also serves on the institutional Commencement Committee and served on a Middle States Self Study Workgroup.

*Secretary (full time, non-exempt):* The Secretary Pat DeAngelis assists in the daily administrative activities of the office, including maintaining student records, telephone work, organizing schedules and meetings, data entry, working with administrators, students, faculty, and other divisions of the college. The secretary administers locker assignments and lamp distribution and performs a daily walk of the school's facilities and reports items needing repair and maintenance to the Office of Buildings and Grounds. She serves on the institution wide Safety Committee.

The Administrative Associate and Secretary are assisted by part time student help.

*Assistant to the Deans for Public Programs and Research (part time, non-exempt):* The Assistant to the Deans Emmy Mikelson administers the public events and lectures sponsored by the School of Architecture, including publicity, electronic broadcasts, technical and other set-up requirements, troubleshooting during the event, and supervising documentation. The assistant also develops and manages various mailing lists

for the school; assists in editing the annual newsletter; assists the faculty with technology, including scanning course materials and AV set-up; manages the production of long reports, and administers other projects and research as necessary and requested. She maintains an active art practice.

With the dean, the School of Architecture Archive develops new exhibitions and publications, maintains the school web site, collects and documents student work, develops, coordinates, curates, designs and installs all exhibitions, maintains special collections, and manages the development and sale of school publications.

*Director, School of Architecture Archive (full time, exempt):* The director Steven Hillyer administers every aspect of the Archive. This includes the publications program, the collection and documentation of student work, the implementation of exhibitions sponsored by the School of Architecture (both within the institution and at other venues), including the 3<sup>rd</sup> floor hallway exhibitions, exhibitions in the Houghton Gallery, and the End of the Year Show; maintaining and updating the School of Architecture website, the ongoing management and preservation of the various Archive collections, and facilitating research requests from both students and faculty. The director manages the staff, the work of part-time student help, administers the budget, and oversees grant-writing. Steven Hillyer is also a writer and film producer.

*The Special Projects Assistant (part-time, non-exempt)* Sara Jones assists in all aspects of the exhibition and publication projects of the Archive including, but not limited to: ongoing collection, organization, and presentation of student work; design and installation of special exhibitions; providing support for the annual exhibition of student work; updating the website; managing digital image files in preparation for exhibition, and assisting with grant applications. Sara also teaches drawing and has an active art practice.

*The Collections Assistant (part-time, non-exempt)* Barb Choit is responsible for several key activities of the School of Architecture Archive including, but not limited to: managing the Blueprint, Post Card, and Lantern Slide Collections; managing the photographic archive of student work; archiving and managing digital media generated by the documentation of student work, assisting with the installation of exhibitions from the Archive's collections; and assisting with photography of student work. Barb also teaches and has an active art practice.

The staff is assisted by part-time student help. (For additional information about the archive see 3.2.4 and 3.8.1)

### **3.6.6 Identification of any significant problem, with recommendations for improvement**

The staff is both committed and extraordinarily hard-working and serves the school more than adequately.

The school's 2007 Planning Report recommended hiring a full time technical administrator for the School of Architecture Computer Studio. Until a new full-time position can be approved, the Cooper Union Computer Center has assigned a part time network engineer to focus on the needs of our Computer Studio, who, with the student monitors, has been effective in addressing most issues that arise in the studio.

## 3.7 Human Resources Development

### 3.7.1 The school's policy regarding human resources development opportunities

Support for faculty and student development is provided at both the program and institutional level. The School of Architecture is committed to the intellectual, creative, professional and personal growth of all students and the continued scholarly and professional development of its faculty and staff. This is achieved through the participation by the faculty and students in the governance of the school, the curriculum, and extensive enrichment programs of the school which are available to the entire community as well as support for interdisciplinary initiatives, assistance with grant and scholarship proposals, information about awards and scholarships, work opportunities for students with the possibility of advancement and leadership, and the support of student and faculty participation in conferences and symposia.

### 3.7.2 List of visiting lecturers and critics brought to the school since the previous site visit

Below is a detailed list of all public lectures and events, and in-class visiting lecturers and critics from the 2008-2009 academic year. Please see attachment 3.7.2 for the list of all lectures and events since 2004.

## PUBLIC LECTURES AND EVENTS, VISITING LECTURERS AND CRITICS

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### 2008-2009

#### Buckminster Fuller Symposium

Presented in Co-sponsorship with the Architectural League of New York and the Whitney Museum of American Art

9/12 Keynote Roundtable

Sanford Kwinter, Professor, School of Architecture, Rice University

Michael Sorkin, Professor of Architecture and Director, Graduate Urban Design Program, City College of New York,

Principal, Michael Sorkin Studio

Moderator: Anthony Vidler, Professor and Dean, The Irwin S. Chanin School of Architecture of The Cooper Union

Introduction: Allegra Fuller

9/13 On Architecture, Design and Science

Peter Galison, Joseph Pellegrino University Professor, Department of Physics, Director, Collection of Historical Scientific Instruments, Harvard University

Chuck Hoberman, Designer, Artist, Engineer, and Inventor

Felicity Scott, Professor, Columbia University GSAPP

Anthony Vidler, Professor and Dean, The Irwin S. Chanin School of Architecture of The Cooper Union

Moderator: K. Michael Hays, Eliot Noyes Professor of Architectural Theory, Co-Director, Doctoral Programs, Harvard

University Graduate School of Design, Adjunct Curator of Architecture, Whitney Museum of American Art

On Influence and Contemporary Art

Carol Bove, Artist

Pedro Reyes, Artist

Elizabeth A. T. Smith, Chief Curator and Deputy Director for Programs, Museum of Contemporary Art, Chicago

Victoria Vesna, Artist

Moderator: Dana Miller, Associate Curator, Whitney Museum of American Art

### **Emerging Exchanges: New Architecture of India**

Presented in Co-sponsorship with the Architectural League of New York, Parsons

The New School for Design, India China Institute of the New School

- 4/30 Keynote: Arjun Appadurai, Goddard Professor for *Architecture and Amnesia in Indian Modernity*  
Media, Culture, and Communication,  
New York University  
Introduced by Anthony Vidler, Professor and Dean,  
The Irwin S. Chanin School of Architecture of The  
Cooper Union

### **Current Work**

Presented in Co-sponsorship with the Architectural League of New York

- 10/28 Craig Dykers, Co-founder, Snøhetta *Current Work: Snøhetta*  
11/3 Kengo Kuma, Founder and Principal, Kengo Kuma &  
Associates *Current Work: Kengo Kuma & Associates*  
11/8 Adriaan Geuze, Founder and Principal, West 8  
Co-sponsored by AIA-NY Chapter, the GIPEC, and  
the NY Chapter of the ASLA *Current Work: West 8*  
11/20 Wolf D. Prix, Co-founder, Coop Himmelb(l)au  
Introduced and moderated by Thom Mayne,  
Principal, mOrphosis Architects, Inc. *Current Work: Coop Himmelb(l)au*

### **The Eleanore Pettersen Lecture**

- 4/2 Billie Tsien, AIA, Partner, Tod Williams Billie Tsien  
Architects *Women's Work is Never Done*

### **2009 Feltman Lecture**

- 5/11 Charles Stone, President, Fisher Marantz Stone, Inc. *Light is the Messenger*

### **Architects Draw - Freeing the Hand**

- 10/2 Chaired by Sue Ferguson Gussow, Painter, Professor Emerita, The Irwin S. Chanin School of Architecture of  
The Cooper Union; Panelists: Dore Ashton, Author, Professor of Art History, The Cooper Union School of Art,  
Senior Critic  
in Painting/Printmaking, Yale University School of Art  
Francois de Menil, Principal, FdM:Arch  
Michael Webb, Professor, The Irwin S. Chanin School of Architecture of The Cooper Union  
Introduced by Elizabeth O'Donnell, Associate Dean, The Irwin S. Chanin School of Architecture of The Cooper  
Union

### **Student Lecture Series**

- 9/25 Elizabeth Grosz, Professor, Women's and Gender  
Studies, Rutgers University  
10/30 Enrique Walker, Professor, Graduate School of  
Architecture, Planning and Preservation, Columbia *Under Constraint*  
University

11/6	Michael Sorkin, Professor of Architecture and Director of the Graduate Urban Design Program, City College of New York; Principal, Michael Sorkin Studio	<i>Eutopia Now!</i>
11/21	Jan Edler, Co-founder, realities:united	<i>Realities: United!</i>
1/29	David Turnbull, Professor, The Irwin S. Chanin School of Architecture of The Cooper Union	<i>It is not what it is_it is what it does</i>
2/5	Mark Linder, Professor and Chairman, Graduate Program, School of Architecture, Syracuse University	<i>The New Liberalism: Banham Re-runs</i>
3/5	Marshall Berman, Distinguished Professor of Political Science, City College of New York and The Graduate Center, City University of New York	
3/12	Rahul Srivastava and Matias Echanove, Urbanologists, Mumbai	<i>Dharavi (Mumbai): Mess n' More</i>
3/18	Wahid Seraj, Field-Operator and Architect, URBZ, Mumbai	
4/9	Reinhold Martin, Co-founder, Martin/Baxi Architects	
4/23	Diana Agrest, Professor, The Irwin S. Chanin School of Architecture of The Cooper Union, Co-founder and Principal, Agrest and Grandelonas Architects	<i>Incursions in Architectural Discourse: An Autobiography</i>

### 2009 Faculty Talks

Sponsored by the School of Architecture Student Council

3/3	Kevin Bone, Professor, Partner and Principal, Bone/Levine Architects	<i>Crafting a Life (In Architecture)</i>
3/31	Pablo Lorenzo-Eiroa, Professor, Principal, eiroa architects	<i>Towards a New Autonomy: Enfolding Contemporary Canons</i>
4/14	Anthony Vidler, Professor and Dean	<i>Entering the Stirling Archive</i>
4/16	Diane Lewis, Professor, Principal, Diane Lewis Architect	<i>Beat the Devil: Mies and Faust</i>

### IN-CLASS GUEST LECTURERS / CRITICS / JURORS

9/8	Raymond Mark, Project Manager, F.J. Sciamé Construction Co., Inc.	<i>ARCH 185: Design Assist: The Façade</i>
9/16	Corie Sharples, Lead Architect, SHoP Architects	<i>ARCH 154: Guest Lecturer</i>
9/30	Toby Cumberbatch, Professor of Electrical Engineering, The Albert Nerken School of Engineering of The Cooper Union	<i>ARCH 153: Ghana Mud-Block: Villages and Dogon Settlements</i>
10/3	Carlos Brillembourg, Author, Principal, Carlos Brillembourg Architects	<i>ARCH 205: Architecture and Poetry, Raul Villanueva and Cesar Vallejo</i>
10/6	Pavel Getov, Project Architect, mOrphosis Architects, Inc.	<i>ARCH 185: Design Development</i>
10/8	Kevin McLaughlin, Professor of English and Comparative Literature and German Studies, Department of English, Brown University	<i>ARCH 225: Guest Lecturer</i>
10/10	Jean Louis-Cohen, Sheldon H. Solow Professor, History of Architecture, New York University IFA	<i>ARCH 205: The City and Political Movements</i>
10/14	Detlef Mertins, Professor of Architecture, University of Pennsylvania School of Design	<i>ARCH 225: Guest Lecturer</i>

10/15	Jon Maass, Project Manager, The Paratus Group, LLp	<i>ARCH 135: Case Study: Glass, Steel &amp; Concrete: The Toledo Art Museum's Glass Pavilion by SANAA</i>
10/17	Sarah Whiting, Architect, Historian, Author, Assistant Professor, School of Architecture, Princeton University	<i>ARCH 205: The Public Sphere: Architecture and Political Theory</i>
10/21	TJ Gottesdiener, FAIA. Managing Partner, SOM	<i>ARCH 154: Guest Lecturer</i>
10/24	Joan Ockman, Historian, Author, Professor, Graduate School of Architecture, Planning, and Preservation, Columbia University, Director, Temple Hoyne Buell Center for the Study of American Architecture	<i>ARCH 205: Form: Architecture, Art, Literature</i>
10/21	Anthony Vidler, Professor and Dean, The Irwin S. Chanin School of Architecture of The Cooper Union	<i>ARCH 153: The Enlightenment and Imperial City: Paris, from Rimbaud to Benjamin</i>
10/27	Albert F. Appleton, Professor, Graduate Program in Urban Affairs and Planning, Hunter College	<i>ARCH 205: Guest Lecturer</i>
10/28	Ward Verbakel, Professor, Department of Architecture, Urban Design and Regional Planning, Katholieke Universiteit Leuven	<i>ARCH 153: French Colonial and Post-Colonial Design Strategies in Asian Cities</i>
10/31	RoseLee Goldberg, Author, Performance Art Producer, Director of "Performa" performance Art Biennial, Faculty, NYU	<i>ARCH 205: Affecting the City through Performance</i>
11/3	Jeff Thompson, P.E., L.E.E.D., Buro Happold Consulting Engineers and Natalia Traverso-Caruana, Project Designer, mOrphosis Architects, Inc.	<i>ARCH 185: Modeling, Analyzing, and Constructing the Mega-mesh</i>
11/3	Peter Simmonds, Ph. D., P.E. Advanced Technology Group, I.B.E. Consulting Engineers	<i>ARCH 185: Design for Thermal Comfort in The Cooper Union New Academic Building</i>
11/4	Neil Kittredge, Partner, Director of Planning and Urban Design, Beyer Blinder Belle Architects and Planners LLP	<i>ARCH 154: Guest Lecturer</i>
11/7	Ackbar Abbas, Author, Professor and Chair, Department of Comparative Literature, UC Irvine	<i>ARCH 205: Still Life: The City and Film</i>
11/10	Jean Oei, Job Captain and Project Designer, mOrphosis Architects, Inc.	<i>ARCH 185: Site Walk-Through</i>
11/13	Kurt Clandening, Structural Engineer, John A. Martin & Associates	<i>ARCH 185: Structural Design, NAB</i>
11/25	Eduardo Cadava, Professor of English, Princeton University	<i>ARCH 225: Guest Lecturer</i>
11/14	Hartmut Frank, Architect, Historian, Author, Professor, Hamburg University.	<i>ARCH 205: The Two Berlins: Urban History and Political Systems</i>
11/21	Mark Jarzombek, Author, Professor, History and Theory of Architecture, School of Architecture and Planning, MIT	<i>ARCH 205: Guest Lecturer</i>
12/16	Thomas Y. Levin, Professor of German, Princeton University	<i>ARCH 225: Guest Lecturer</i>
12/16	Kyna Leski, Professor of Architecture, RISD	<i>ARCH 111: Guest Juror</i>
12/17	Andreas Huyssen, Professor of German and Comparative Literature, Columbia University	<i>ARCH 225: Guest Lecturer</i>
12/18	Catherine Seavitt Nordenson, Principal, Catherine Seavitt Studio	<i>ARCH 205: Guest Critic</i>
1/8	New York Institute of Technology	<i>ARCH 153: Guest Lecturer</i>

1/29	Peter Fend, Artist, Founder, Ocean Earth Development Corporation (OCEAN EARTH)	<i>ARCH 205: Guest Lecturer</i>
2/10	Roberto Sanchez, Professor of Environmental Sciences, University of California, Riverside	<i>ARCH 153: Panama Modern and the Canal Zone</i>
2/12	Daniel Schuetz, Architect, Munich/New York	<i>ARCH 205: Recent Trends in Masonry Construction</i>
2/17	David Gouveneur, Professor, Departments of Landscape Architecture and City and Regional Planning, School of Design, University of Pennsylvania	<i>ARCH 153: Caracas Modern History + Medellin Slum Rehab Examples</i>
2/17	Francine Monaco, D'Aquino Monaco	<i>ARCH 154: Guest Lecturer</i>
2/23	Elliot D. Sclar, Professor of Urban Planning, School of International and Public Affairs, Director, Center for Sustainable Urban Development, Columbia University	<i>ARCH 225: The Millennium Development Goals and the City</i>
2/24	Dennis Crompton, Architect, Founding Memeber, Archigram	<i>ARCH 153: Japanese Megastructures</i>
2/24	Ben Bischoff, Partner, MADE, LLC	<i>ARCH 154: Guest Lecturer</i>
2/26	Giovanni Santamaria, Adjunct Instructor, School of Architecture and Design, NYIT	<i>ARCH 153: Guest Lecturer</i>
3/2	Smita Srinivas, Assistant Professor of Urban Planning, Graduate School of Architecture, Planning, and Preservation, Columbia University	<i>ARCH 225: Industrial and Technological Changes: Indian Cities and Regions in Perspective</i>
3/4	Mark Kolodziejczak, Architect	<i>ARCH 135: Approved as Noted: Shop Drawings and Collaboration with Fabricators</i>
3/5	Robert Silman, President, Robert Silman Associates	<i>ARCH 205: Falling Water: Structural Intervention, In Time</i>
3/5	Dennis Crompton	<i>ARCH 153: Origins of Archigram</i>
3/9	Viren Brahmhatt, Visiting Assistant Professor, Pratt Center for Planning & the Environment, Pratt Institute, Principal, de.Sign	<i>ARCH 225: Architecture of Disjuncture: Transformation and Transmutation of Cities Under Globalization</i>
3/13	Steven Nelson, Associate Professor of African and African American Art History, UCLA	<i>ARCH 125: Guest Lecturer</i>
3/17	Gene Kohn, RIBA, JIA, Chairman, KPF	<i>ARCH 154: Guest Lecturer</i>
3/24	Kimberly Y. Yao	<i>ARCH 131: Guest Juror</i>
3/24	Alexandra Barker, Adjunct Assistant Professor, School of Architecture, Pratt Institute	<i>ARCH 131: Guest Juror</i>
3/26	Diane Lewis, Professor, The Irwin S. Chanin School of Architecture of The Cooper Union	<i>ARCH 205: Finding One City in Another: An Interpretation of City Maps</i>
4/1	Mark DuBois, Partner, Ohlhausen DuBois Architects	<i>ARCH 135: Case Study: Architectural Concrete and Structural Glass Walls in a New Mexico House</i>
4/3	Michael Hays, Eliot Noyes Professor of Architectural Theory, Harvard University Graduate School of Design	<i>ARCH 125: The Vicissitudes of Surface, 1956 to 1966: Mies in America, Venturi</i>
4/7	Roxanne Ryce-Paul, Architect and Urban Planner, EcoEcoBuilding	<i>ARCH 153: Town Planning and Historic Conservation in Trinidad</i>
4/13	Robert Neuwirth, Journalist and Author	<i>ARCH 225: The Extroverted City of System D</i>
4/15	Aleksey Lukyanov, Member, SITU Studios	<i>ARCH 135: CNC: Digital Technology in Fabrication and Design/Build</i>
4/16	Will Laufs, PhD, Vice President of Specialty Structures, Thorton Tomasetti	<i>ARCH 205: Use of Glass in Building: Technological Evolution</i>

4/17	Michael Hays	<i>ARCH 125: The Structuralization of the City: Rossi, Rowe</i>
4/24	Michael Hays	<i>ARCH 125: The Textualization of the Object: Eisenman and some progeny</i>
4/27	Simone Giostra, Founder, Simone Giostra & Partners Architects	<i>ARCH 185, Feltman Seminar: GREENPIX: Media, Content and Performance</i>
5/1	Michael Hays	<i>ARCH 125: Encounters: Hejduk and progeny</i>
5/4	Chris Allen, Creative Director, The Light Surgeons, London	<i>ARCH 185, Feltman Seminar: True Fictions and Other Stories</i>
5/7	Raimund Abraham, Architect	<i>ARCH 205: Guest Critic</i>
5/8	Michael Hays	<i>ARCH 125: Spacing and Event: Tschumi, Koolhaas</i>
5/13	Vikram Prakash, AIA, Partner, Verge Architecture, Professor, Department of Architecture, University of Washington	<i>ARCH 125: Chandigarh in the Context of Indian Neo-Colonialism</i>

### 3.7.3 List of public exhibitions brought to the school since the previous site visit

The School of Architecture Archive is responsible for the installation of all School of Architecture exhibitions.

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#### 2004-2005

##### **Doors and Thresholds: Selections from the Lantern Slide Collection**

3rd Floor Hallway Exhibition, October 2004

Curated by Gia Mainiero and Uri Wegman

This exhibition was developed through a careful search of photographic prints made from the School of Architecture Archive's Lantern Slide Collection, which was donated by The Cooper Union Library in the late 1980s, and is comprised of over ten thousand 4 x 5 glass slides that focus primarily on the history of architecture spanning from Egyptian and Greek up to mid Twentieth Century Modernism. This presentation included images that spanned over four centuries of architectural styles.

##### **Coming to Light**

The Louis I. Kahn Monument to Franklin D. Roosevelt for New York City

The Arthur A. Houghton Jr. Gallery, January 10 - February 5, 2005

Presented by the Irwin S. Chanin School of Architecture of The Cooper Union and the Franklin and Eleanor Roosevelt Institute.

The exhibition examined the evolution of Kahn's design for the Roosevelt Memorial, which is his only completed late work that remains unbuilt. The construction documents and specifications were completed with the support of the office of Mitchell/Giurgola Architects and David Wisdom Architect after Kahn's death in March 1974. The exhibition materials, which range from hand sketches on trace paper to a recently produced digital animation which allows the viewer an experiential passage through the memorial design, offered a rare opportunity for the public to see the architectural design process and the evolution of the methods of architectural representation over the past three decades. Following the public acclaim of the documentary *My Architect*, directed by Kahn's son Nathaniel, this exhibition was instrumental in the effort on the part of the Franklin and Eleanor Roosevelt Institute to realize the construction of the memorial. Parts of the memorial are currently under construction.

##### **Louis I. Kahn Exeter Library**

3rd Floor Hallway Exhibition, January – March 2005

Curated by Gina Pollara

Presented in conjunction with the Houghton Gallery exhibition *Coming to Light: The Louis I. Kahn Monument to Franklin D. Roosevelt for New York City*, this show consisted of blueprints previously acquired from the Louis I. Kahn Archive at the University of Pennsylvania in the 1990s.

**The Annual Exhibition of Student Work**

The Irwin S. Chanin School of Architecture  
Foundation Building, 3rd and 7th Floors, May-June 2005

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**2005-2006**

**Spectral Emanations: Paintings by Robert Slutzky**

The Arthur A. Houghton Jr. Gallery, 14 September–14 October 2005

This exhibition celebrated the late painter's impressive career with a selection of paintings spanning close to fifty years. Slutzky's explorations of form, space, color and structure within the frame of a square canvas, as well as in theoretical writings like the two seminal "Transparency" articles co-authored with Colin Rowe, reflect a rigorous evolution drawing on the disciplines of painting and architecture and inspired by his love of music.

**Le Corbusier – Ronchamp**

3rd Floor Hallway Exhibition, November 2005  
Curated by Gina Pollara

This exhibition featured rare blueprints of the drawings for Ronchamp chapel, which were previously acquired from the Foundation Le Corbusier in the 1980s.

**Expo '67: Photographs from the Stanley Prowler Collection**

3rd Floor Hallway Exhibition, April 2006  
Curated by Steven Hillyer

This was the first installation in a series of ongoing exhibitions of the photography of Brooklyn-born Architect, Stanley Prowler (1919-2004). The collection of six thousand images, accumulated over Prowler's lifetime, were donated to the Architecture Archive in 2006. The images chronicle Prowler's visit to the site of Expo '67 in Montreal Canada, which was open to the public from April 28 to October 29, 1967.

**The Annual Exhibition of Student Work**

The Irwin S. Chanin School of Architecture  
Foundation Building, 3rd and 7th Floors, May-June 2006

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**2006-2007**

**Inner Spaces: Drawings by Svein Tønsager**

3rd Floor Hallway Exhibition, October 2006

**The Annual Exhibition of Student Work**

The Irwin S. Chanin School of Architecture  
Foundation Building, 3rd and 7th Floors, May-June 2007

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## 2007-2008

### **The Comprehensive Third Year 2006-2007**

The Arthur A. Houghton Jr. Gallery, 30 September – 3 October  
Curated by Steven Hillyer and Sara Jones

This exhibition presented the work of the 2006-2007 third year comprehensive studio integrating the work of Design, Structures, Environmental Technologies and Building Technology courses.

### **Two Journeys: Works by Michael Webb**

Spring 2008 Robert Gwathmey Chair in Architecture and Art  
The Arthur A. Houghton Jr. Gallery, 22 January – 12 February  
Remarks by Dennis Crompton, Kent Kleinman, and Michael Webb

The exhibition was dedicated to the twenty-six first year students at The Cooper Union in Professor Webb's charge. Having spent the fall 2007 semester learning, through their drawings, who they were, Webb viewed this exhibition as an opportunity for the students to learn about him and his work. Organized in a linear manner, the exhibit can be read like the pages of a book. It concerns two themes, or journeys: a train of thought deriving from the Reyner Banham article "A Home is not a House" (1965), and a study of linear perspective projection.

A journey could be simply defined as the moving from one point in space to another point. A journey can also take on figurative overtones: Siegfried's *Journey to the Rhine*, Jack Kerouac's *On the Road*, the nineteenth century's obsession with finding the source of the Nile comes to mind. Webb's interests lies within this latter sense of the word.

The Robert Gwathmey Chair in Architecture and Art at The Cooper Union is a rotating professorship in honor of Robert Gwathmey, who was a professor of art at Cooper Union from 1942 to 1968.

### **Sant' Ivo Variation**

3<sup>rd</sup> Floor Hallway Exhibition, 4 September – 31 October

A graduate thesis project completed by Professor Michael Young while at Princeton University, this exhibition presented an exploration of the architectural intersections of a 17th century building, 19th century mathematics, and a 21st century tool. On October 9, Professor Young discussed this work with students in the School of Architecture.

### **Expo '70: Photographs from the Stanley Prowler Collection**

3<sup>rd</sup> Floor Hallway Exhibition, 6 November – 8 February  
Curated by Barb Choit

This was the second installation in a series of ongoing exhibitions of the photography of Brooklyn-born Architect, Stanley Prowler (1919-2004). The collection of six thousand images, accumulated over Prowler's lifetime was donated to the Architecture Archive in 2006. This exhibition chronicled Stanley Prowler's visit to the Japan World Exposition, also known as Expo '70, held in Osaka from March 15 to September 13, 1970.

In conjunction with this exhibition, a screening of the film *US Pavilion – Expo 70* was held on December 6 in the School of Architecture. It was followed by a discussion with Professor Anthony Candido, who made significant contributions to the design of the pavilion and initially supervised its design and construction on the site in Japan.

### **Japanese Temples and Gardens**

3<sup>rd</sup> Floor Hallway Exhibition, 12 February – 28 March

Selected images from School of Architecture Archive's Lantern Slide Collection, which is comprised of over ten thousand 4 x 5 glass slides that focus primarily on the history of architecture spanning from Egyptian and Greek up to mid Twentieth Century Modernism.

### **The Five Year Design Studio Sequence 2006-2007**

3<sup>rd</sup> Floor Hallway Exhibition, 6 - 10 April

Curated by Steven Hillyer and Sara Jones

In conjunction with a site visit by the Middle States Commission on Higher Education, the School of Architecture presented digital images of selected works from all five design studios from the 2006-07 academic year.

### **The Annual Exhibition of Student Work**

The Irwin S. Chanin School of Architecture

Foundation Building, 3<sup>rd</sup> and 7<sup>th</sup> Floors, May-June 2008

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### **2008-2009**

#### **In Memoriam**

##### **William Cooper Mack**

*April 2, 1982 – June 3, 2008*

#### ***by way of observation***

September 19 – 26

The Arthur A. Houghton, Jr. Gallery

Curated by Steven Hillyer and Raha Talebi

William Cooper Mack, Irwin S. Chanin School of Architecture class of 2006, died on 3 June 2008 following a four-month battle with acute leukemia. A tribute to Cooper (as he was known to everyone at the School) was held on September 19 in the Arthur A. Houghton, Jr. Gallery, along with the opening of an installation to celebrate his academic and professional work.

The installation, *by way of observation* was the result of the collaborative efforts of colleagues, family and friends who knew and loved Cooper or came to know him through his work. This included the Raha Talebi (AR '05), the Mack and Talebi families, fellow graduates from the class of 2006, friends and neighbors from Rogers, Arkansas, current students, staff of the School of Architecture and the School of Art, and the School of Architecture Archive.

#### **Architects Draw—Freeing the Hand**

October 2–14, 2008

The Arthur A. Houghton, Jr. Gallery

Curated by Sue Ferguson Gussow and Steven Hillyer

The Irwin S. Chanin School of Architecture presented an exhibition of student work from the ARCH 178 Advanced Drawing Seminar from 1977-2006 to celebrate the publication of *Architects Draw*, a book by Sue Ferguson Gussow, Professor Emerita at the School of Architecture. Released as the inaugural volume of the Architecture Briefs series published by Princeton Architectural Press, *Architects Draw* outlines Gussow's pedagogy of teaching freehand drawing to architects developed over more than thirty years at The Cooper Union. It is illustrated with drawings by one hundred twenty five of Gussow's Freehand Drawing and Advanced Drawing students, and includes the work of architects who employ freehand drawing as a significant component of their practice.

### **Lost and Found: The Cooper Union School of Art and Architecture, 1938-67**

3<sup>rd</sup> Floor Hallway Exhibition, November 21, 2008 – February 10, 2009

Curated by Barb Choit and Steven Hillyer

During the 2005-06 academic year, as preparations were made to vacate the Hewitt Building, the Architecture Archive became involved in the process of a building-wide search for materials pertaining to the history of the institution. The search brought to light a collection of photographs dating from 1938-1966. These documents expanded the scope of the Architecture Archive's records, which had previously dated from 1964. These photographs depict a time during which Esmond Shaw was Dean of the Department of Architecture, the interior renovation of the Foundation Building designed by John Hejduk had not yet been initiated, and the pedagogy documented in the 1971 *Education of an Architect: A Point of View*, had not yet been developed.

### **Demolished Manhattan Hotels: A History in Postcards**

#### **Selections from The Joseph Covino New York City Postcard Collection**

3<sup>rd</sup> Floor Hallway Exhibition, February 12 – April 9, 2009

Curated by Barb Choit

*Demolished Manhattan Hotels: A History in Postcards* is a selection from the Joseph Covino New York City Postcard Collection, held at The Irwin S. Chanin School of Architecture Archive. Donated by Joseph Covino in three separate installments between 1999 and 2003, the collection consists of thousands of postcards of New York City dating from the late-1800's to the mid-1900's. This exhibition presented original postcards of eighteen Manhattan hotels, which have all since been demolished. The oldest hotel, Astor House, was built in 1836, and the last surviving, the Hotel Hermitage, was destroyed in 1991. The postcards in this exhibition can be seen as a survey of buildings as they become obsolete, thereby adding a historical dimension to the postcards' original function as souvenirs.

### **The End of the Year Show**

The Irwin S. Chanin School of Architecture

Foundation Building, 3<sup>rd</sup> and 7<sup>th</sup> Floors, May-June 2009

### **3.7.4 A list of student support services, including academic and personal advising, career guidance, and internship placement where applicable**

Student support occurs at the institutional and program level.

Currently, the areas of financial aid, career services, recreational programs, student clubs, the student residence, student government, the student handbook, orientation and graduation, medical insurance and access to psychological counseling fall under the supervision of members of the Office of Student Services. Recognizing the exceptional privilege conferred on students by the gift of a The Cooper Union education and realizing that barriers to obtaining an education still prevail in the United States at the beginning of the 21<sup>st</sup> Century, the staff of the Office of Student Services defines its mission as "...helping our students to overcome any obstacles that impede their academic success. Our objectives are to award the financial aid necessary for students to focus on their studies, to create a safe and healthy environment in which our students can live and learn, to encourage excellence in athletics and co-curricular activities, to foster a sense of community through ceremonies, activities, and strong student government, to intervene when students are in crisis, and to develop a student's professional identity through career counseling." While the activities of the Office of Student Services are somewhat constrained by its small staff, the size of the student population allows the office to tailor its services to meet the needs of individual students, even as the scope of its activities expands.

The staff of the office of Student Services consists of the Dean of Students, the Associate Dean and Director of Health and Recreation, the Director of the Center for Career Development and an Administrative Assistant for the Center for Career Development, the Director of Financial Aid and the Assistant Director of Financial Aid, a Financial Aid Counselor, a Career Counselor, the Residence Hall Manager and the Assistant Residence Hall Manager, the Residence Hall Office Manager, the Financial Aid Assistant, the Administrative Assistant, the Webmaster and the Receptionist. Student employees provide additional support.

There are many positive aspects of student life at The Cooper Union: the high level of intelligence of our students, their helpfulness toward each other, their intensity of professional commitment, their strong work ethic, and the respect that students demonstrate for their peers. Students have a deep connection to the school. The school's location in New York city offers incomparable cultural, social and professional resources. Yet many things are lacking at The Cooper Union as well; the schedule of classes leaves students virtually no free time, comfortable lounge space is limited, and the sense of community between the three schools can be fragmented. The very high participation in Orientation and in the ski trips attests to how eagerly students seek contact with each other. Our students would appreciate having more shared activities, and major progress in student life is anticipated now that the new academic building at 41 Cooper Square is completed and ready to open.

**The Center for Career Development** provides a wide range of programs and resources for students in all schools. The Center is dedicated to providing students effective career-building tools that will help to prepare and empower students to make a successful transition from studying with a distinguished and creative faculty to applying their knowledge and skills to professional practice. Programming by the center is designed to complement the academic offerings, encourage autonomy and collaboration, enhance a student's professional identity, and empower enlightened contributions to society.

Career exploration is an important component of student life at The Cooper Union, and an open house is held during orientation each year to introduce new students to the employment seminars, job search workshops, and individual career counseling sessions offered to all students. Workshops are offered throughout on developing a resume, writing a cover letter and other job search skills as well as on special topics such as graduate school applications, law and medical school applications, and national fellowships application. A "brown bag" lunch program, CU@lunch, brings young alumni back to the school to speak about their work and practice. In 2008-2009, Architecture alumni Fiyel Levent ('03) and Anne Romme spoke to a full audience about their individual design practices, applying for fellowships, working toward licensure and forming a new partnership.

The center maintains a website and on-site career resources Library. The center also runs a professional Internship program for art and architecture students who are juniors and seniors in good academic standing. These internships have been used at non-profit institutions such as the Whitney Museum, the Museum of Modern Art, the Metropolitan Museum, the American Museum of Natural History, the Transit Museum, PS 1, Socrates Sculpture Park, Artists Space, the Center for African Art, etc. Internships at private firms are also supported for students to work on pro-bono projects: for the past two summers, the program supported architecture students working as interns for the Lee H. Skolnick Architecture + Design Partnership. Lee is a school of architecture alumnus who is providing pro-bono services to The Cooper Union as the designer for the exhibition now under construction in The Great Hall colonnade gallery.

The senior class receives special attention in terms of career counseling. Many architecture students continue on to graduate school or begin full-time employment at firms where they have worked as part-time employees during their fourth and fifth years of study. Since 2005, eight graduates have won Fulbright Fellowships, and others have entered graduate programs at Columbia, Harvard, Princeton, Yale, the University of Pennsylvania, among other institutions. In recent years, Architecture graduates have taken positions at firms such as Skidmore Owings and Merrill LLP, Pei Cobb Freed and Partners, Samuel Anderson Architects and Grimshaw Architects.

The administrative associate of the School of Architecture serves as an informal "job placement" center for students seeking work and alumni in practice seeking help. Similarly, our faculty offer many students summer work, career counseling, and references for employment in local and distant firms. Many students work for the school, as assistants in the archive, technicians in the computer studios, draftspersons for capital projects, and design assistants for exhibitions.

**Psychological counseling.** The Training Institute for Mental Health uses The Cooper Union as a placement for its graduate interns in social work. The interns help to fill a gap between the excellent neighborhood mental health resources and the lack of counseling staff on campus; students can see the counseling interns by appointment or as drop-in visitors at The Cooper Union or at the Training Institute for three free hour-long visits. Students who choose to continue beyond three visits can either use their medical insurance or take advantage of a sliding-scale student rate or both. Two of the alumnae of the program have returned to The Cooper Union to work as consultants to the dormitory staff. Student Services maintains a listing of additional neighborhood services on its Web site, highlighting special initiatives for students.

The Beth Israel Medical Center performs psychiatric evaluations for the school in cases in which a student does not seem capable of handling the challenges of returning to or continuing in school. This is useful in cases when a student needs to be provided with continuing care and medications. As an additional service, Beth Israel is willing to work directly with our students to help them locate medical or psychological care using whatever insurance the student is on; The Cooper Union student insurance is one of which they accept.

**Medical Insurance.** Since 1998, The Cooper Union has required that all of its students have medical insurance. Students with no coverage can buy The Cooper Union insurance plan.

**Financial Aid, Scholarships and Awards.** In addition to the **Full-tuition Scholarship** received by all matriculated students and visiting students gaining entrance to the School, students with demonstrated need are offered additional assistance as the budget may allow. In addition, the School of Architecture makes every effort to be aware of external scholarship and award opportunities and to bring this information to eligible students. (For more information about financial aid see 3.4.2)

Recognizing that the current generation of students is extremely comfortable retrieving information electronically, Student Services has made a major effort to create and keep updated a Web site that contains electronic versions of virtually every form required by this office, allows clubs to submit their requests for funding electronically, and provides information about activities, policies, and personnel.

**The Student Residence** is located across Third Avenue from the Foundation Building and provides housing for new students. A Residence Hall Association has formed, and, with the hiring of a Program Coordinator of Residence Life, there has been an expansion of formal residence hall activities, including both social programming and counseling sessions.

**The Center for Writing and Language Arts**, the division of the Faculty of Humanities and Social Sciences, has become a significant resource for students and for faculty at The Cooper Union. Individual tutoring and small group workshops are offered to assist students in their writing and presentation assignments at all levels of work. Each semester, the center employs an average of 11 highly qualified writing associates and writing fellows.

As part of orientation, all new students are required to attend workshops directed by the Center for Writing and Language Arts on college level research and writing including standards for academic integrity, and what constitutes plagiarism. An essay is assigned at the end of the two-hour program and each essay is reviewed and ranked by a team from the center. This diagnostic essay identifies students who are likely to have difficulty with their academic work. Students with a low diagnostic score are then assigned to specific sections of HSS 1 (required of all students) in which faculty provide support and coordination with the Center. The center also informs the academic deans of those students who need support in reading and writing work. During the 2008-2009 academic year architecture students made an average 225 visits to the Center each semester, a 60% increase since 2005-2006.

Students with English as a Second Language (ESL) issues are assigned to ongoing sessions with tutors who have expertise in this area. Identifying students with ESL is part of the diagnostic writing assignment given during orientation. Students who participate in ESL support at the CWLA ideally meet with their tutors three times per week.

Those students identified with development and writing issues are also assigned to ongoing sessions with CWLA senior associates meeting three times per week. These students are tracked through grades and regular reports prepared by writing associates that are sent to the individual students, their appropriate faculty, and their dean if necessary.

The CWLA also assists students in writing grant and fellowship applications, including the Benjamin Menschel Fellowships for Creative Inquiry (administered by the Faculty of Humanities and Social Sciences) and U.S. Fulbright Scholars awards. With the extraordinary help of the CWLA, School of Architecture graduates have won 8 Fulbright awards since 2004.

At the program level, academic advising is managed by the associate dean. Since there is only one undergraduate program, credit audit summaries showing required courses completed and overall progress are prepared for every student each semester by the administrative associate. The associate dean meets with students to discuss unusual circumstances or the need for special considerations. Individual faculty members in the School of Architecture are also available for advisement. Faculty advisors in the Faculty of Humanities and Social Sciences provide thoughtful advising to all students regarding both their required and elective course opportunities, and are assigned as advisors to those students who wish to meet the requirements of a minor. Advising regarding mathematics and physics is available to our students from the engineering faculty.

Students in good standing are permitted to interrupt their studies for a period of one year for purposes of study or travel. This option is available to architecture students who have completed at least one year of study; a meeting with and permission from the associate dean is necessary.

Formal consideration of academic difficulties in individual courses occurs at about the seventh week of classes with the distribution of "mid-semester reports" to students. This report (of difficulties) is for notification and advisement only, and is not a part of the student's permanent academic record. At the end of each semester, the Academic Standards Committee meets to review the status of students having difficulty at the program level or are failing to make adequate progress toward graduation. This committee reviews all students whose grade point average falls below 2.0 and/or whose grade in architectonics or design falls below "C". Individual students have the opportunity to attend the meeting of the Academic Standards Committee or provide a written explanation of any relevant circumstances. Due to the small size of the school, it is possible to give individual attention to the progress and records of all students, and information gained through informal faculty conferences aids greatly in the overall evaluation process.

### **3.7.5 Evidence of the school's facilitation of student opportunities to participate in field trips and other off-campus activities**

The Cooper Union is located in downtown Manhattan, one of the city's most dynamic neighborhoods, where students can take advantage of galleries, theaters, movie houses, museums and cafes as well as two other universities all within walking distance of the school. The nearby stations of two major subway lines provide easy access to all of New York City, offering students access to some of the finest collections of architecture and art in the world, unparalleled opportunities to view traveling and special exhibitions and to fully experience citizenship in an extraordinarily diverse and vibrant world city. Students witness architecture and urban policy in the making, and benefit tremendously from the rich mix of cultures, ideas and issues always in play in New York City. Students make constant use of the cultural institutions of the city, both large and small, public and private, mainstream and on the edge. Before and after graduation, the city offers excellent professional internship opportunities in firms that vary widely in size, focus, structure and philosophy.

## **CLASS FIELD TRIPS AND SITE VISITS**

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### **2004-2005**

9/15	ARCH 185	Walking tour, Harlem, 110 to 125 Street
9/22	ARCH 185	Studio Museum in Harlem
9/28	ARCH 154	Offices of David Brody Bond, 315 Hudson Street
9/29	ARCH 185	Harlem State Office Building, 163 West 125 Street
10/29	ARCH 111	North River Wastewater Treatment Plant, West 135 Street and Hudson River
10/22	ARCH 111	Con Edison Power Plant, 14th Street and Avenue C
10/13	ARCH 185	Metropolitan Museum of Art
10/13	ARCH 185	Rikers Island Facility, NYC
10/6	ARCH 185	Dr. Howard Dotson, Director, Schomburg Center for Research in Black Culture, 515 Malcolm X Blvd
11/10	ARCH 185	Laveen Naidu, Director, Dance Theatre of Harlem, 466 West 152 Street
11/10	ARCH 135	The Morgan Library / Renzo Piano Project, 231 Madison Avenue
11/19	ARCH 143	Strivers Gardens, 135 Street and Frederick Douglas Blvd
11/3	ARCH 115	Metropolitan Museum of Art

3/26	ARCH 141	Nivola Studio, 410 Old Stone Highway, East Hampton, NY
4/6	ARCH 135	The Morgan Library / Renzo Piano Project, 231 Madison Avenue
4/20	ARCH 125	Tour of East and West Villages, NYC

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### 2005-2006

9/15	ARCH 143	Construction site at 123 Washington Street
9/24	ARCH 111	Circle Line, Pier 83, West 42 Street: Hidden Harbor Tour of Staten Island, Brooklyn, New Jersey, North River
10/18	ARCH 154	Offices of SOM, 14 Wall Street
10/19	ARCH 185	Various sights/sites in Washington, DC
10/28	ARCH 115	Metropolitan Museum of Art
10/29	ARCH 111	Webb Institute, 298 Crescent Beach Road, Glencove, Long Island
12/8	ARCH 131	Governor's Island, New York City
2/1	ARCH 225	Department of Environmental Protection Archives, East 38 Street
3/6	ARCH 143	Construction site, Atelier, 621-635 West 42 Street

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### 2006-2007

10/5	ARCH 143	Construction site, Atelier, 627 West 42 Street
10/18	ARCH 185	Various sights/sites in Harlem
10/27	ARCH 115	Metropolitan Museum of Art
10/29	ARCH 111	Seagram Building, 375 Park Avenue
10/31	ARCH 154	Offices of Beyer Blinder Belle, 41 East 11 Street
2/10	ARCH 205	Walking tour of the West Village, NYC
11/7	ARCH 154	Offices of SOM, 14 Wall Street
11/30	ARCH 143	Construction site at 257 West 117 Street
12/7	ARCH 225	New Croton Dam, outside NYC
2/28	ARCH 141	Whitney Museum of American Art
4/5	ARCH 131	ATI Architectural Testing in York, Pennsylvania
	ARCH 132	
	ARCH 134	
	ARCH 135	

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### 2007-2008

10/4	ARCH 143	Construction site at 123 Washington Street
10/26	ARCH 115	Metropolitan Museum of Art
1/28	ARCH 225	New York City Housing Authority and Tenement Museum, 108 Orchard Street
2/27	ARCH 135	Construction site of new academic building (41 Cooper Square)
4/8	ARCH 154	Offices of Anik Pearson Architects, Anik Pearson, Principal and Founder
5/18	ARCH 225	Flight 587 Memorial, Queens
Bi-weekly	ARCH 185	Constructions sites, etc.

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### 2008-2009

10/2	ARCH 143	Construction site at 605 West 42 Street
10/4	ARCH 225	Walking tour of the West Village, NYC
10/11- 10/12	ARCH 225	Various sights/sites in Washington, DC

10/17	ARCH 115	Metropolitan Museum of Art
10/19	ARCH 225	Various locations in Harlem
11/19	ARCH 114	Metropolitan Museum of Art
1/22	ARCH 121	Situ Studio, 20 Jay Street, Suite 203, Brooklyn
2/4	ARCH 121	Whitney Museum of American Art
2/10	ARCH 154	Offices of D'Aquino Monaco Architects, 214 West 29 Street
2/27	ARCH 143	Construction site at 123 Washington Street
3/31	ARCH 154	Offices of MADE LLC, 141 Beard Street in Red Hook, Brooklyn
3/30	ARCH 205	Various sights/sites in Harlem
3/3	ARCH 154	Offices of KPF, 111 West 57 Street
4/23	ARCH 205	Ford Foundation, 321 East 42 Street
Bi-weekly	ARCH 185	Construction site of new academic building (41 Cooper Square)

### **3.7.6 Evidence of opportunities for students to participate in professional societies and organizations, honor societies, and other campus-wide activities**

The School of Architecture pays the annual dues of both the ASCA and the AIAS for every registered student in order to assure that all students have access to the myriad benefits of these organizations without regard to financial means. The school also respects the rights of our students to individually determine their level of involvement in these organizations. There is interest among current students to develop more active participation in AIAS activities. Interested students can receive support to attend the AIAS Grassroots Leadership Conference, and our students hosted the Northeast Regional "Quad" conference at the school in 2003.

Because of the active relationship between the School and the Architectural League of New York, the league offers memberships to our students free of charge. The league has had a prominent role in New York artistic and civic life for more than 100 years with programs to enhance the profession and a broader understanding of the purposes and importance of architecture. Membership admits students free to the many events, lectures and exhibitions sponsored by the league, including their Annual Student Program. The day long Student Program includes panel discussions by a diverse group of young design professional and three studio visits to leading firms throughout the city followed by a reception.

The National Society of Collegiate Scholars, which draws its members from all three schools, held its first initiation ceremony in October 2002. Students are invited to join the society based on their GPA and some students in the School of Architecture choose to accept the invitation.

Despite not having its own athletic facilities, The Cooper Union boasts a dozen intercollegiate athletic teams that practice and play in rented or loaned spaces throughout the city and compete in Division III of the NCAA. The Cooper Union remains faithful to the tradition of the scholar athlete, and no students are recruited to the school for the athletic program. The program includes a varsity team in basketball, men's and women's volleyball, men's and women's tennis, ultimate Frisbee, Step, men's soccer, and an equestrian team. In addition, there are numerous intramural teams. An annual ski trip to Mont Sutton, Quebec, held over the winter break draws an average of 150 students. Architecture students are currently active on soccer and other teams.

The Cooper Union supports a very active student government, supports student clubs and professional societies, residence hall programs, special events such as the Fall Festival, the annual Pumpkin Carving Contest, Freshman Orientation, and community service events such as the Breast Cancer Walk, the

Christmas Toy Drive and the "Pi" mile run, and senior class activities such as preparing a yearbook. Students serve as spokespersons for the school at internal and external events and over 85% of our students vote in their student government elections.

The Joint Activities Committee web server handles the budget requests and accounts of the student clubs supported by funds from the committee. Currently, almost eighty clubs are actively competing for Joint Activities Committee funds. School of Architecture students recently secured funding through the JAC to purchase equipment and periodicals for the School of Architecture Study Collection, host receptions following some of their lectures and to buy flat files for the "big studio".

The demands of the academic programs, the fact that the master schedule leaves only a single two hour block on Tuesday free for campus wide student activities, the lack of adequate space for athletic activities or club meetings, the limited amount of funds available, the paucity of professional staff to help with such activities, all make it remarkable that The Cooper Union has so many students active outside the classroom.

### **3.7.7 Description of the policies, procedures, and criteria for faculty appointment, promotion, and tenure with access to faculty development opportunities.**

During this accreditation cycle, there have been two retirements from the full time faculty, one addition to the full-time faculty (professor with tenure; previously on the proportional time faculty), and four new appointments to the proportional time faculty (all from the adjunct faculty). The resident faculty currently numbers fourteen. (Because of his administrative appointment, the dean is not counted in the full time faculty, although he is tenured.) During the same period there were three promotions on the proportional time faculty, from associate professor to professor.

Strategic plans at both the school and institutional level call for increasing the full time faculty and increasing funds for faculty development. In the near term, vacancies on the faculty will be filled with adjunct and/or proportional-time appointments; all current faculty will be eligible to apply for any full-time positions authorized over the next few years.

Full time faculty are represented by The Cooper Union Federation of College Teachers (CUFCT), a local chapter of the New York State United Teachers/American Federation of Teachers; in May 2009, the part time faculty voted to establish and be represented by a local chapter of the NYSTU/AFT.

The school's policy and procedures for the review of full time faculty for promotion and tenure aligns with the CUFCT contract provisions:

#### **Procedure for Review of Full Time faculty for Promotion and Tenure**

##### **1. Consent of Faculty Member for Review**

No full-time Faculty member who is a member of the bargaining unit will be reviewed for reappointment, promotion or tenure without his or her consent.

##### **2. Bargaining Unit Committees on Reappointment, Promotion, and Tenure**

The members of the Faculty as defined by the Governance will carry out their responsibilities for making recommendations to the President in accordance with the Governance of each such Faculty,

subject to the understanding, however, that for the purpose of making substantive recommendations in matters involving reappointment, promotion or tenure, bargaining unit members who are members of the full-time Faculty in the School of Architecture, the School of Art or the Faculty of Humanities & Social Sciences will separately elect within the particular School or Faculty, by ballot, a distinct committee of bargaining unit members to consider matters of this kind and make separate recommendations, as applicable. One year of full-time service is required for Faculty members to be eligible to serve on any committee considering matters of reappointment, promotion, or tenure. In matters of reappointment, each such Departmental Committee shall be a committee of the whole; but the individual being considered for reappointment shall be excluded from voting. In matters of promotion, each such Departmental Committee shall be comprised only of those bargaining unit members who are of rank senior to the member under consideration. In matters of tenure, each such Departmental Committee shall be comprised only of those bargaining unit members who are tenured. In addition, full-time Faculty who are members of the bargaining unit in each department will separately elect by November 15 of each academic year, by ballot, a tenured member to represent the department on a distinct committee composed of one bargaining unit member from each department to consider matters of promotion and tenure which arise during that academic year and to make separate recommendations. Any recommendation made by any committee under this provision shall be made in a reasonable and timely fashion as prescribed by the appropriate Dean.

### 3. Advanced Notice of Reappointment, Promotion, and/or Tenure Reviews

A member of the full-time Faculty who is a member of the bargaining unit and who is scheduled to be reviewed for reappointment, promotion or tenure will be so notified at least 45 days in advance, will receive timely notice of the documents to be used in the review, and will be given reasonable opportunity to submit materials for consideration, including letters of recommendation.

### 4. Annual Reappointment Decision

Decisions about the reappointment of non-tenured full-time Faculty will be communicated in writing to the affected persons by the following dates:

- During the first academic year of full-time service, by March 1;
- During the second consecutive year of full-time service, by December 1;
- After two or more consecutive years of full-time service, by December 1 of the penultimate year of appointment.

If a non-tenured faculty member is initially appointed after the beginning of the academic year but before January 1 of that academic year, then the decision about the reappointment shall occur by March 1 of that academic year in which the initial appointment was made. If, however, the non-tenured full-time Faculty member is initially appointed after the beginning of the academic year but on January 1 or later, then the decision about the reappointment shall occur by December 1 of the academic year immediately following the initial appointment.

In the case of a decision against reappointment, notification of the decision will include an explanation of the reasons for the decision.

### 5. Tenure Decision

Tenure is a guarantee of continuous employment for a full-time Faculty member who is a member of the bargaining unit until resignation, retirement or dismissal for adequate cause. A final decision to

grant or deny tenure will be made no later than December 1 of the sixth consecutive year of full-time service. If tenure is denied in the sixth consecutive year of full-time service, the member of the full-time Faculty who is a member of the bargaining unit will be granted a terminal full-time appointment for the academic year in which the final decision to deny tenure is made.

If a non-tenured full-time faculty member is initially appointed after October 1st, then the tenure clock will begin as of the following semester.

Early Tenure - In addition to being considered for tenure during the sixth consecutive year of full-time, a member of the full-time Faculty who is a member of the full-time Faculty who is a member of the bargaining unit may apply or be sponsored for tenure only once prior to the sixth consecutive year of full-time service ("Early Tenure"). Notification of a decision to grant or deny Early Tenure shall be given within six (6) months from the time that the application for Early Tenure is made.

Notification of a decision to deny tenure will include an explanation of the reasons for the decision.

#### 6. Promotion Review Decision

Any Faculty member reviewed for and denied promotion will be notified to this effect in writing by Commencement of the Academic Year in which the decision was made. This notification will include an explanation of the reasons for the decision.

#### 7. Meetings with the Dean Regarding Changes in Status

A meeting will be held between each full-time Faculty member who is a member of the bargaining unit being considered for a change in status such as, but not limited to, reappointment, promotion, or tenure and the appropriate Dean to discuss and evaluate work performance. This meeting will occur at a time appropriately in advance of the time that the contemplated change would occur. Except in extraordinary circumstances, each such full-time Faculty member will be kept informed in writing of all official evaluations of work performance within 30 days after completion of such an evaluation.

#### 8. Grievances Regarding Procedure

If a full-time Faculty member who is a member of the bargaining unit about whom a decision has been made on matters involving reappointment, promotion, or tenure believes that any procedure referred to above was not followed, the full-time Faculty member may process the claim through ARTICLE XXXV (GRIEVANCE AND ARBITRATION PROCEDURES), but such processing is restricted solely to processing issues of procedure except in the case of any grievance involving, in whole or in part, the application or interpretation of Article II (ACADEMIC FREEDOM AND ACADEMIC FREEDOM GRIEVANCE PROCEDURES) which may be processed pursuant to the provisions of the Academic Freedom Grievance Procedures as defined therein, only.

#### 9. Procedures Not Covered by Governance

In the event that a Governance of any particular Faculty does not contain established procedures to carry out any of the provisions of paragraphs A. through G. of this Article and it is necessary to consider matter of reappointment, promotion or tenure, then, until such time as that particular Faculty adopts such procedures in accordance with the terms of its Governance, as applicable, the Dean of any such Faculty shall call for an election, by ballot, in which the full-time members of the particular Faculty who are members of the bargaining unit shall elect a committee of bargaining unit members to carry out the provisions of paragraphs A. through G., to the extent necessary. The Dean shall not

serve as a member of the committee or participate in its deliberations. Committee recommendations shall be made to the appropriate Dean in a reasonable and timely fashion as prescribed by that Dean.

The institution supports faculty development within the constraints of the CUFCT contract that precludes supplements to the salary of bargaining unit members. Thus funded support can only be for specific research or projects. Institutional development is administered by the Office of External Affairs and/or the President's Office. The School of Architecture Archives assists in writing grant proposals for faculty projects, publications, etc.

Each year the following faculty development opportunities are offered by The Cooper Union through the Office of the President. All faculty are eligible to apply for the awards.

- Benjamin Menschel Faculty Fellowships: Curriculum development projects based on new course formats and collaboration between at least two of the four faculties at The Cooper Union for courses open to all students. Awards: up to \$5000.
- Durbin Faculty Development Grants: Support for development of innovative educational methodologies that advance the mission of Cooper Union. Award: \$3000.
- Dale Harris Fund: Expenses for trips and visits that bring students into direct contact with the arts. Award: Costs per trip up to \$1000.
- Edward Sharp Burdell Awards: Stipend to cover course and exhibition expenses for projects that study conjunctions of Science and Art. Award: \$1000.

Awards in these areas will be made by the academic deans of The Cooper Union on the basis of detailed proposals for new projects that will occur within twelve months.

### **3.7.8 Evidence of school's facilitation of faculty research, scholarship, and creative activities, including sabbatical leaves, unpaid leaves, opportunities for the acquisition of new skills and knowledge, and support at attendance of professional meetings**

The School of Architecture actively encourages and supports faculty in their efforts to maintain scholarly, creative, and professional research and activities, including participation in conferences and symposia. All full time faculty have at least two unscheduled days per week to pursue their professional and creative work.

In addition to the standard policy of sabbatical leaves after six years, the agreement between The Cooper Union and the CUFCT now allows for half-year sabbaticals after three years, at two-thirds pay. This policy was developed in part to aid younger faculty preparing for tenure. One faculty member, Professor Diane Lewis, took advantage of this program in fall 2005.

The Cooper Union offers faculty the opportunity to take an unpaid leave, which can be extended for a maximum of 10 semesters. Professor Ricardo Scofidio took unpaid leave during spring 2007 and Professor Peter Eisenman took unpaid leave during the academics years 2004-2005 and 2005-2006.

Since the last visit, the dean has given nine continuing faculty (resident and adjunct) appointments with reduced teaching loads in order to provide time for those faculty to research and develop new seminar courses, which are then offered to students during a subsequent semester. This has significantly expanded architecture elective offerings and has resulted in most resident faculty prepared to teach either studio or seminar classes as necessary. (See Faculty Course Loads and Service, 2004-2009 in section 3.6.2.)

The School of Architecture sponsors exhibitions, symposia, lectures, and publications of its faculty at all levels, including:

- Exhibitions of the work of Professor Michael Webb (fall 2007) and Professor Michael Young (fall 2007).
- Exhibition and publication of faculty pedagogy/student work, including an exhibition of student work from Professor Emerita Sue Gussow's Freehand Drawing class (fall 2008), the development of a publication of Professor Lewis' Architectural Urbanism studio 2000 to 2009 (summer 2009), and the design of a book of work of the Thesis class of 2008 (summer 2008).
- Sponsorship of symposia chaired by faculty, including *World Water*, chaired by Professor Kevin Bone (spring 2007) and *New York Since Guernica*, chaired by Professor Diane Lewis (spring 2008).
- Seventeen individual lectures given by faculty at the school since 2004 (see paragraph 3.7.2 public lectures)

The school will provide travel support for faculty to give papers at conferences. Professor Tamar Zinguer received support to present papers at the Society of Architectural Historians and the Canadian Center for Architecture (2008).

When budget allows, the school can support coursework/study by faculty to develop skills for new teaching strategies; the school supported Professor Davis to enroll in two classes in advanced digital methods at the Stevens Institute of Technology (2008).

The School of Architecture provides full time and proportional time faculty with a new laptop computer on a six year rotation. Since 2004, the school has provided 8 laptops for faculty use, and paid for the repair of one additional laptop.

The school provides administrative support for special faculty events and "workshops" with students. The school worked with two new first year faculty to sponsor a "99 cent charette", a full scale experiment that required five groups of students, each with only 99 cents, to gather materials from the city to create an enclosure in one afternoon.

The School of Architecture Archive provides extensive, highly skilled support to faculty in developing books to be co-published with or published by others. The Archive worked with Professor Kevin Bone on the preparation and design of *Waterworks, the Architecture and Engineering of the New York City Water Supply* (2004-2006), co-published with the Monicelli Press and with Professor Emerita Sue Gussow on *Freeing the Hand, Architects Draw* (2006-2008), published by the Princeton Architectural Press.

### 3.7.9 Evidence of how faculty remain current in their knowledge of the changing needs of practice and licensure

The faculty consists of highly accomplished architects and engineers in active practice as well as emerging professionals, historians, theorists, writers and visual artists. Among our resident and adjunct faculty there are many architects and engineers whose work has been recently published in architectural journals including *Architectural Record*, *Domus*, *Architecture +*, as well as the in the general media, including *The New York Times*, *New York Magazine* and *Metropolis*. Current work has also been published by MIT Press and Princeton Architectural Press.

The professional faculty are required to meet the requirements of their registration boards for continuing education, including a minimum number of hours in coursework outside of teaching, and specifically devoted to issues of health, safety and welfare of building users.

Faculty accomplishments and citations are posted monthly in the *President's Newsletter*, and faculty summarize their activities at the end of each academic year for the School of Architecture newsletter *Architecture at Cooper*. Faculty also are asked annually to update their web pages on the School of Architecture website. Electronic copies of *Architecture at Cooper* are attached as an appendix. A full presentation of faculty work will be available for the Visiting Team to review, as evidence of the extensive ongoing research, scholarship and professional activities of our faculty.

## 3.8 Physical Resources

### 3.8.1 General description of the physical plant

**With the completion of The Cooper Union's new building, the academic campus of The Cooper Union** is now comprised of two architecturally significant buildings. The Foundation Building, which houses the academic programs of the Schools of Architecture and Art, The Great Hall, The Cooper Union Library and the President's suite, now faces the entry of the new building at 41 Cooper Square, directly across Third Avenue to the southeast.

The facilities of the School of Architecture are housed on the third and seventh floors of the Foundation Building, a National Historic Landmark. The 1975 interior is one of the few built projects of John Q. Hejduk, the first dean of the school.

**Studios.** All students in the School of Architecture are provided individual workspace on the third floor within shared studios. The first through fourth years share a single large studio and the fifth year thesis class and Master of Architecture students share smaller studio spaces across the hall from the "big studio". An environment fostering cross-fertilization between all classes and individual students is fostered and maintained with all studios on a single floor. The spirit of the design studio informs and permeates the entire school, and students value its intensity.

In addition to major capital work described in section 2.1.1, minor improvements are made to the studios each summer, at the requests of students. Recently, worktables, light tables, cutting surfaces, and flat files were added to the studio for common use.

Wireless access to the Internet is available in all studios. Students need only have a Cooper Union e-mail account (which is available at no charge to all students, faculty and staff) to access the system. The system is scheduled to be upgraded in fall 2009 to improve speed and reliability.

**Classrooms and Presentation Rooms.** Although the institution has recently initiating a centralized scheduling plan for all classrooms, the School of Architecture has priority scheduling over three classrooms: F315, a tiered lecture room for 70 on the third floor, and F714, a seminar classroom and F715, a classroom/presentation room on the seventh floor. These rooms are in constant use. Each room is equipped with a ceiling mounted digital projector, speakers, a projection screen and a wall interface that allows for easy hook-up and the capacity to switch between output options. A high quality camera is available for special lectures to be recorded. A "smart" podium with reading light, recording microphone, DVD/VCR and projection controls is being redesigned for F315. "Analog" slide projectors are equipped with remote control. F315 serves all lecture-style classes, and the many special lectures that occur at the school which frequently attract a large number of students and faculty from throughout The Cooper Union.

**Study Collection.** The School of Architecture has fostered the growth of a non-circulating study collection of books and other visual material that are not otherwise accessible through The Cooper Union Library system. The collection makes available to students and faculty the work of multiple disciplines, sometimes including rare or limited edition items, often on loan from private collections. The collection is housed in F714, which also serves as an excellent seminar room, a room for faculty and student meetings, and a room for quiet reading and study by students after classes. The room is administered by students for study in the after-class hours.

**Shop.** An outstanding shop facility shared by the architecture, art and engineering schools is located on the fourth floor. Although integral to both program and pedagogy and used extensively by architecture students, the shop is administered by the School of Art. School of Architecture faculty have expressed the need for input into the planning and setting of policy for this facility, and students may need to wait to use certain tools at busy times.

**The School of Architecture Computer Studio.** A full description of the facility, and other shared digital resources throughout The Cooper Union, are described in section 3.8.3.

**The School of Architecture Archive.** In addition to its work with the exhibitions program of the School, the archive maintains a record of the history of the School of Architecture's pedagogy through the documentation of student work and provides resources to the students in order to augment and enhance their architectural education.

The archive is a unique resource that has become a fundamental part of the pedagogy of the school. It is located on the second floor of the Foundation Building, close to the School of Architecture office and studios. It maintains several collections of great value to the curriculum, and great interest to the students. The collections are for in-room research only:

**Student Work.** Photographic (analog and digital) images of student design work recorded on an annual basis. This collection is an invaluable resource for exhibitions, publications, accreditation purposes, and student/faculty research. Photographs recorded prior to the formal establishment of the archive have also been incorporated into the collection.

**Blueprint Collection.** Reproductions of drawings of historic architectural works of the 20th century as well as New York City centric infrastructures. These materials are used for research purposes in conjunction with the design studio analysis project, as well as the building technology and structures curriculum.

**Lantern Slides.** A collection of 10,000 black and white lantern glass slides, formerly part of The Cooper Union Library Slide Collection. This broad assortment of slides encompasses historical sites, architecture, painting, sculpture, manuscripts, city planning, drawings, jewelry and mosaics from early history to the 20th century.

**New York City Waterfront.** A collection of photographs and reproductions drawn from the collections of many New York City municipal agencies (including the Department of Docks, the Municipal Archives, the Triborough Bridge and Tunnel Authority, and the Department of Environmental Protection) that appeared in the 1994 exhibition *Essential City: New York Waterfront Survey*. This project led to the 1997 publication *The New York Waterfront: Evolution and Building Culture of the Port and Harbor*.

**Stanley Prowler Collection.** A collection of over 60,000 35mm and medium format transparencies all taken by late Architect Stanley Prowler during his travels around the world. These images focus mainly on built works of architecture, all taken with an architect's eye.

**The Joseph Covino New York City Postcard Collection.** Over 2,500 postcards donated to the Archive in three separate installments between 1999 and 2003, these images document specific New York City landmarks, neighborhoods, and building typologies during the 20th century.

**Rare Books.** The Archive is home to rare books that have been donated to or purchased by the school, including first edition books about Le Corbusier, and folios from the Limited Edition Book Club. Rare books are or room use only.

The Archive will acquire, document and retain any reproductions of significant architectural works that faculty members feel is of importance to add to the existing Blueprint Collection. This usually occurs when students are given analysis projects in the design studio. Arrangements can also be made for the donation, reproduction or purchase of blueprints, should a student have a request for a particular building for a project not on file.

Work-study and part time student help supplement the daily activities within the office, which include the handling of archival photographic materials, documentation of student work, transcription of text documents, scanning materials for exhibitions and publications, and research. Students also assist in the installation of exhibitions in both the Houghton Gallery and third floor hallway.

The archive houses several digital cameras that students are able to checkout and use to produce any course-related work. Uses of the equipment range from basic site documentation to the making of short films.

Students can also purchase photographic reproductions of their work if it has been documented by the Archive. These materials are often used to construct portfolios for grants, fellowship applications or job

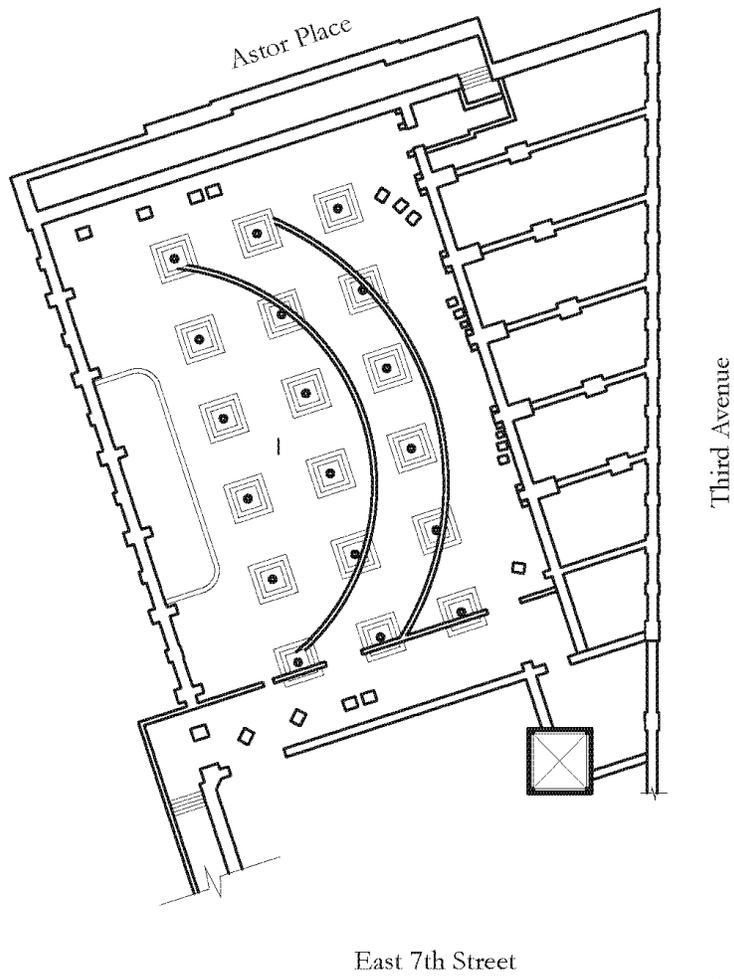
interviews. The additional income generated by these purchases offsets the ongoing photography expenses incurred by the archive.

All available School of Architecture publications – some of which are coveted documents of academic significance – are offered for purchase. Students receive a 10% discount on all archive books. Funds from book sales support future publication projects.

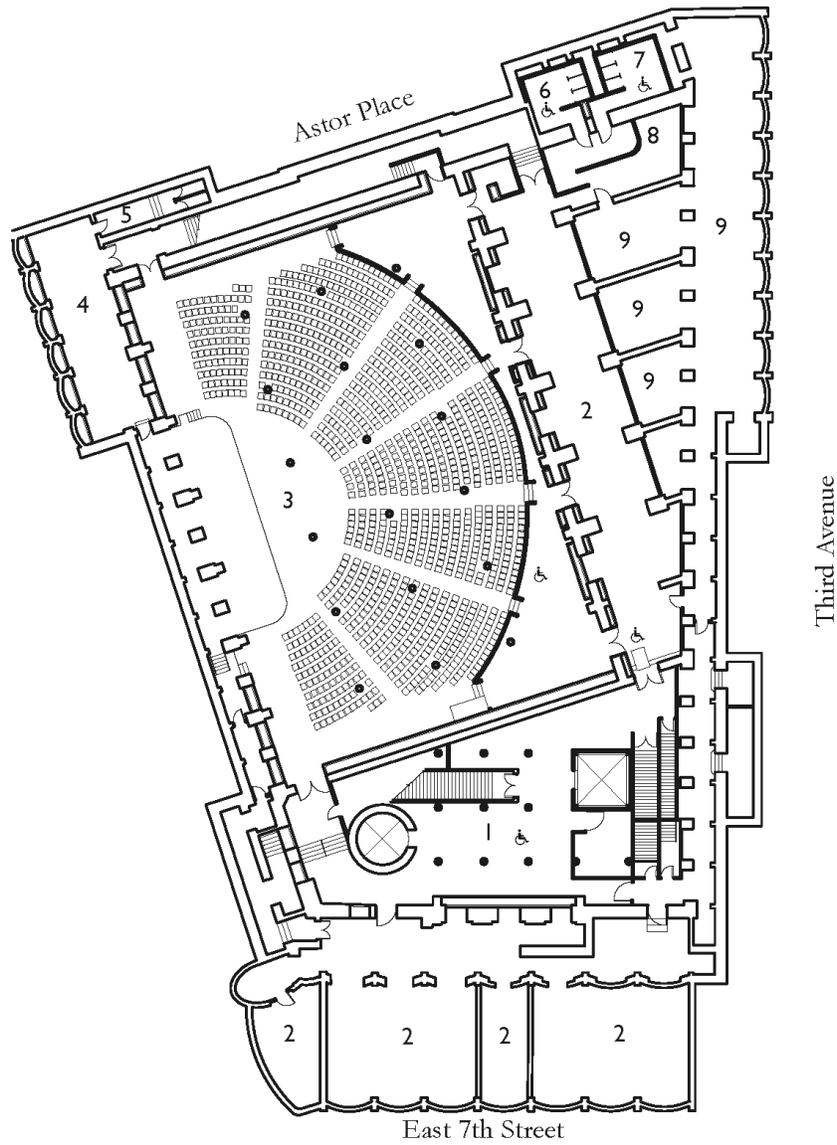
**Great Hall.** The School of Architecture continues to co-sponsor lectures of professional, academic and public importance each year in The Great Hall, a site of great historic and social significance. These lectures are free of charge to all students and faculty of The Cooper Union, and many students attend the lectures. The Great Hall can accommodate an audience of 900, and lectures occasionally reach the full capacity of the hall.

**The new academic building** at 41 Cooper Square houses the entire program for the School of Engineering, studios for the School of Art as well as facilities for the institution as a whole: state of the art research and teaching laboratories, lecture, seminar and studio classrooms, faculty offices, the Cooper Union Computer Center, a lecture room with video-conferencing capabilities, and important public spaces such as a second exhibition gallery and a new 210 seat auditorium. The new building will also provide, with the Foundation Building it faces, a “visible statement of The Cooper Union’s academic and civic values.” A formal ribbon cutting ceremony for 41 Cooper Square will be held on 15 September 2009.

Labeled 8-1/2 x 11 drawings of the Foundation Building follow; plans of 41 Cooper Square will be available in the team room.



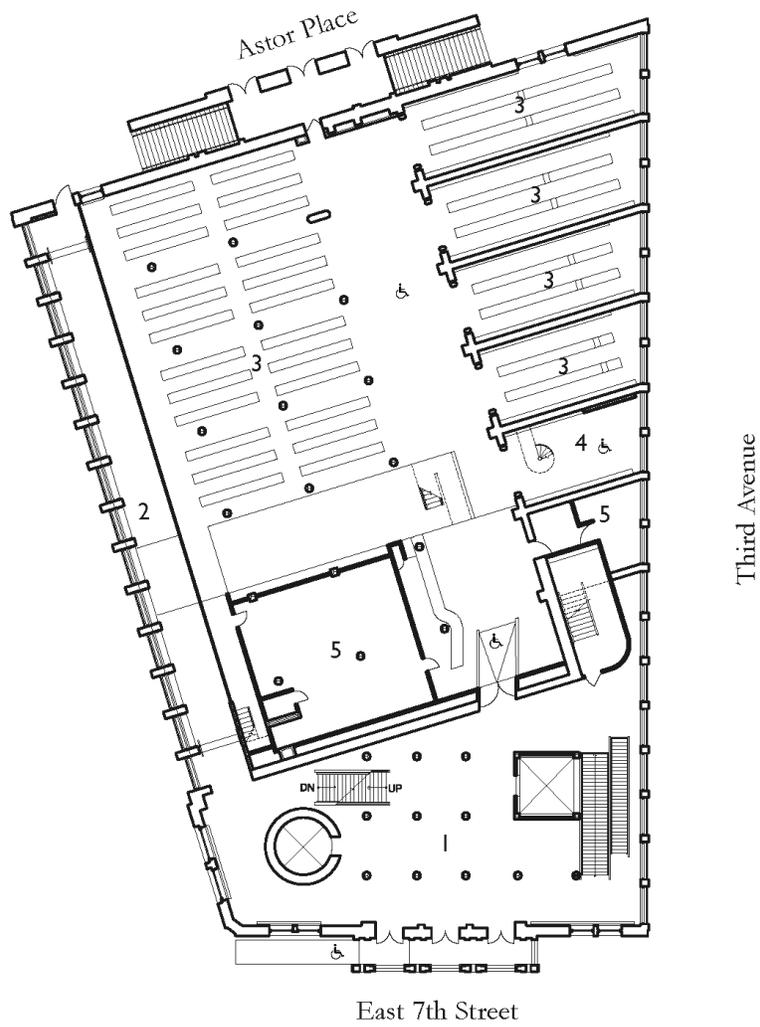
## Foundation Building - Sub Basement



**Key**

- |    |                           |    |                  |
|----|---------------------------|----|------------------|
| 1. | Lobby/ Exhibition         | 8. | Storage          |
| 2. | Mechanical Rooms          | 9. | Vault Mechanical |
| 3. | The Great Hall Auditorium |    |                  |
| 4. | Green Room                |    |                  |
| 5. | Powder Room               |    |                  |
| 6. | Women's Restroom          |    |                  |
| 7. | Men's Restroom            |    |                  |

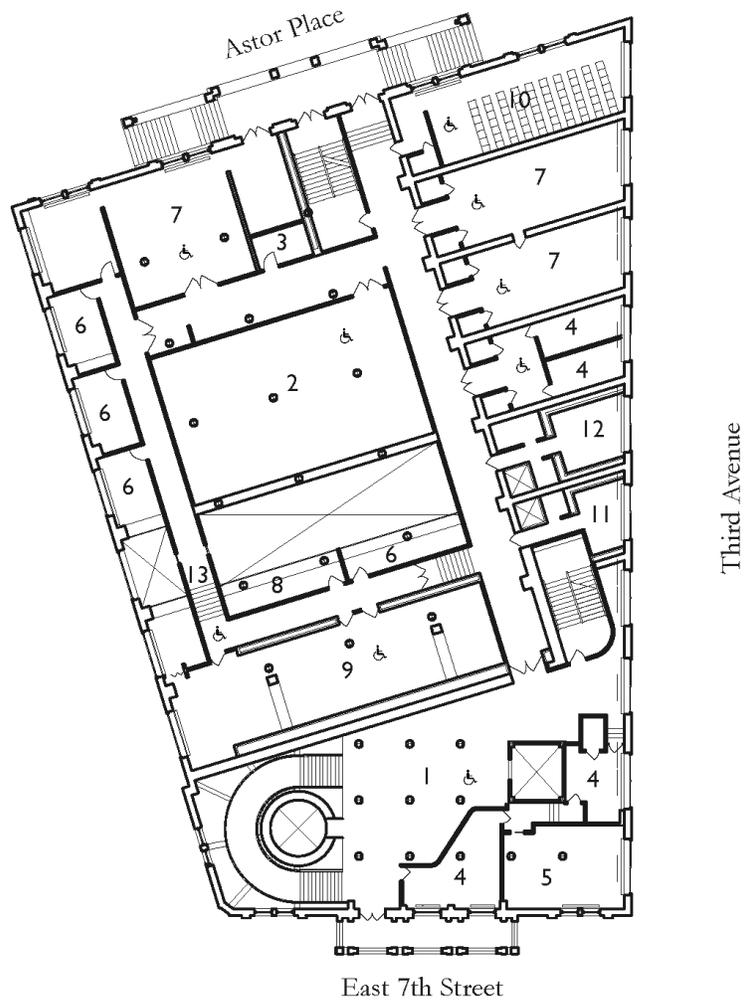
**Foundation Building - Basement**



**Key**

- 1. Entrance Lobby
- 2. Entrance Colonnade
- 3. Library Stacks
- 4. Magazine Room
- 5. Library Offices

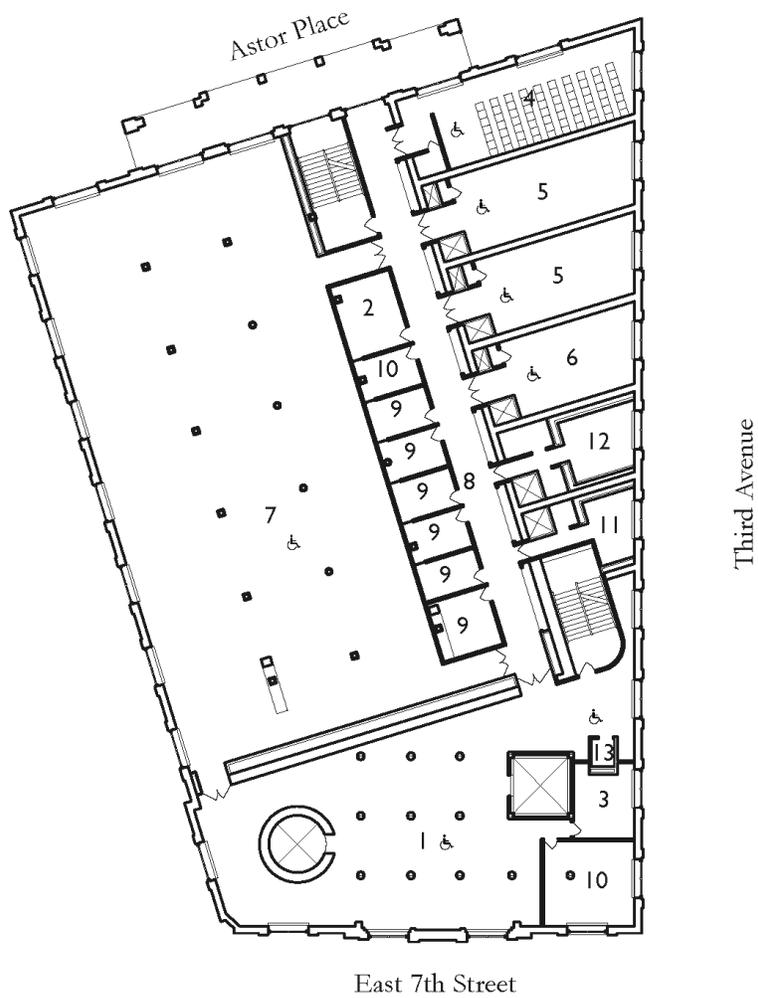
**Foundation Building - First Floor**



**Key**

- |                                  |                                       |
|----------------------------------|---------------------------------------|
| 1. Lobby/ Exhibition Area        | 9. School of Architecture Archive     |
| 2. Houghton Gallery              | 10. Lecture Classroom                 |
| 3. Houghton Gallery Storage      | 11. Women's Restroom                  |
| 4. School of Art Administration  | 12. Men's Restroom                    |
| 5. School of Art Dean            | 13. Accessible Lift (in construction) |
| 6. School of Art Office          |                                       |
| 7. School of Art Studios         |                                       |
| 8. School of Architecture Office |                                       |

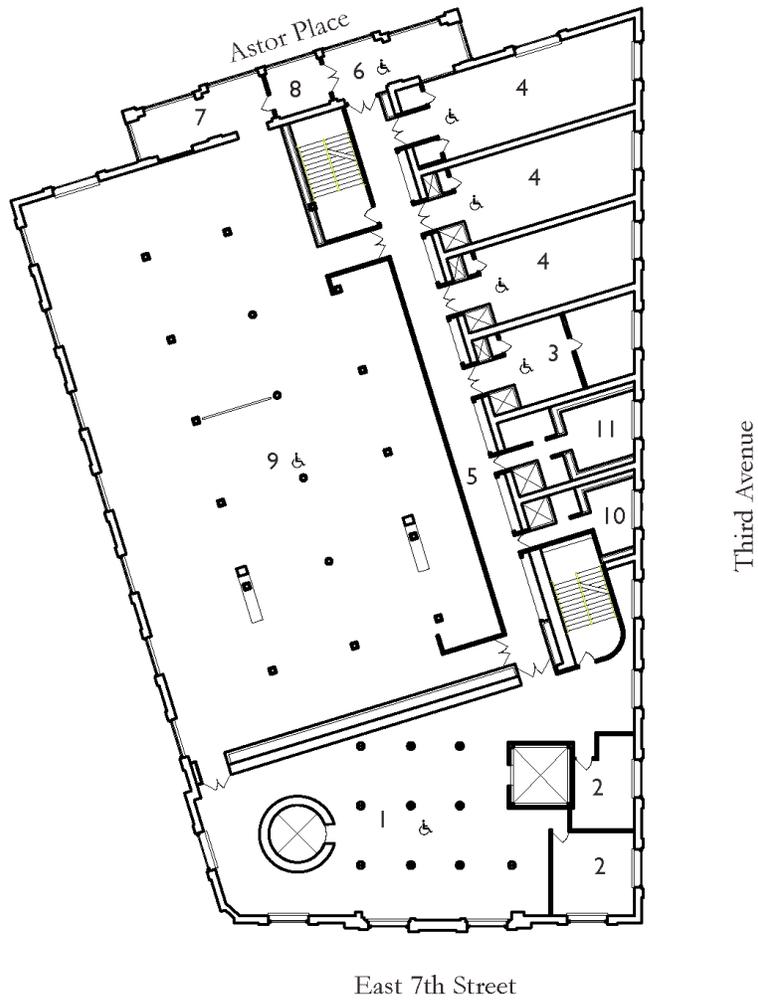
**Foundation Building - Second Floor**



**Key**

- |                                          |                                 |
|------------------------------------------|---------------------------------|
| 1. Lobby/ Critique & Exhibition          | 9. Architecture Faculty Offices |
| 2. School of Architecture Associate Dean | 10. Architecture Staff Offices  |
| 3. School of Architecture Dean           | 11. Women's Restroom            |
| 4. Lecture Classroom                     | 12. Men's Restroom              |
| 5. Thesis Studios                        | 13. Accessible Restroom         |
| 6. Master's Studio                       |                                 |
| 7. Studio, First through Fourth years    |                                 |
| 8. Corridor and Exhibition Area          |                                 |

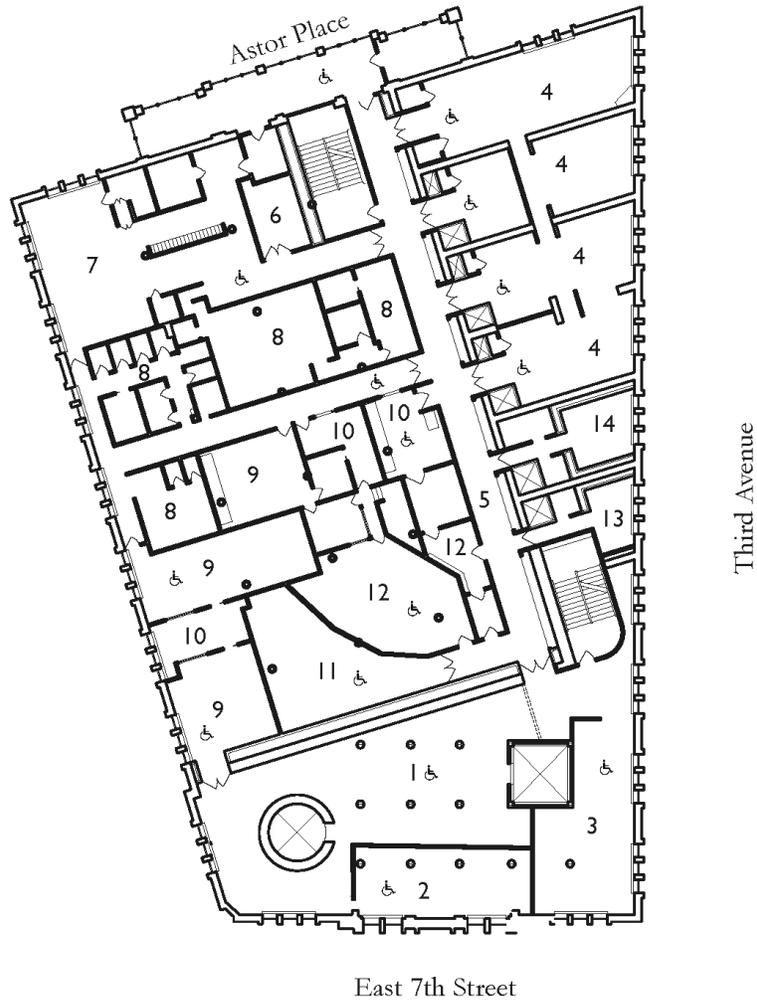
**Foundation Building - Third Floor**



**Key**

- |    |                             |     |                      |
|----|-----------------------------|-----|----------------------|
| 1. | Art Studios                 | 9.  | Main Shop Facilities |
| 2. | Art Faculty Office          | 10. | Women's Restroom     |
| 3. | Plastics/ Laser Cutter Room | 11. | Men's Restroom       |
| 4. | Art Studios and Classrooms  |     |                      |
| 5. | Corridor                    |     |                      |
| 6. | Plaster Room                |     |                      |
| 7. | Wax Room                    |     |                      |
| 8. | High Ventilation Room       |     |                      |

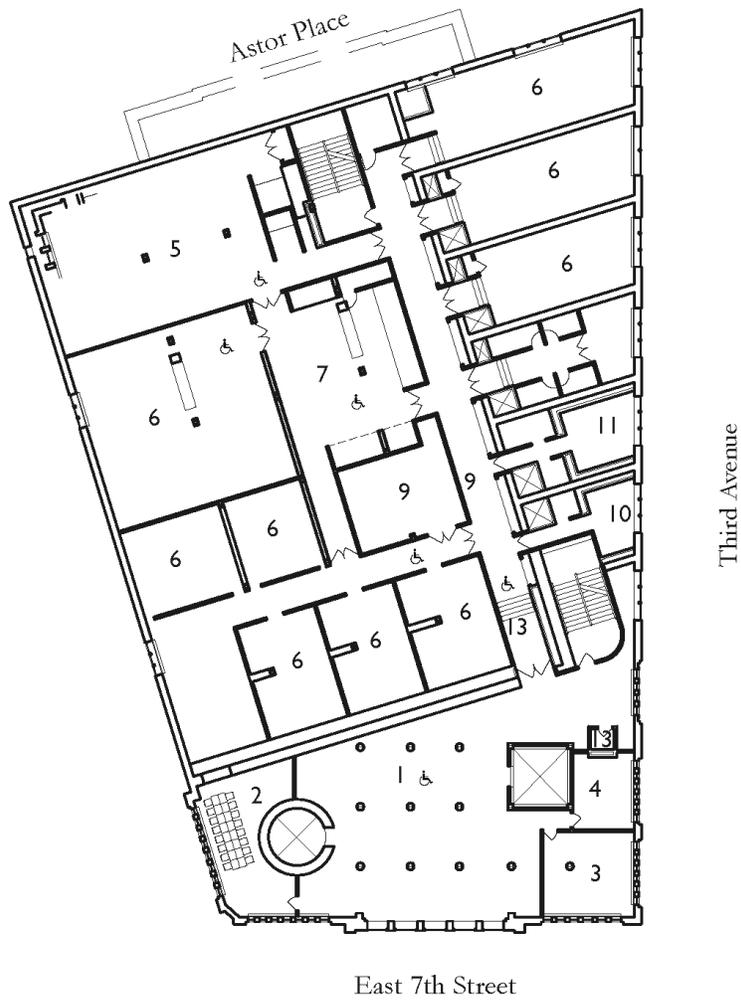
**Foundation Building - Fourth Floor**



**Key**

- |                                      |                           |
|--------------------------------------|---------------------------|
| 1. Lobby/ Critique & Exhibition Area | 9. Film and Video Studios |
| 2. Classroom                         | 10. Equipment Checkout    |
| 3. Typography/ Letter Press Room     | 11. Photo Studio          |
| 4. Printmaking Shop                  | 12. Seminar Room          |
| 5. Corridor                          | 13. Women's Restroom      |
| 6. Copy Camera                       | 14. Men's Restroom        |
| 7. Silk Screen Shop                  |                           |
| 8. Photo Darkrooms/ Developing       |                           |

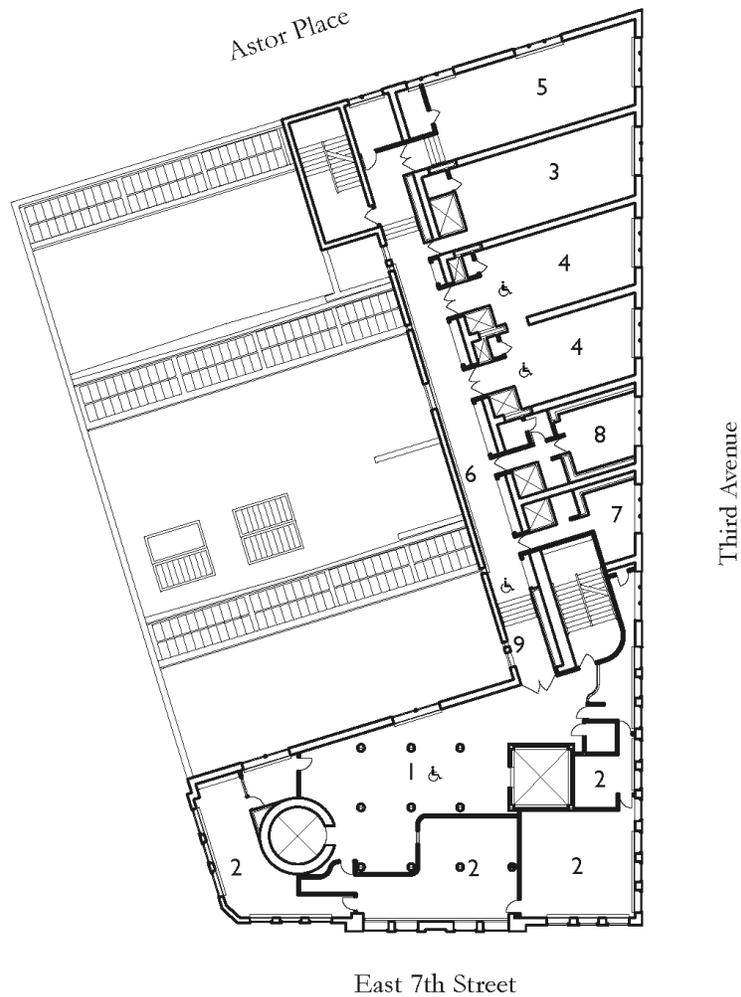
**Foundation Building - Fifth Floor**



**Key**

- |                                      |                         |
|--------------------------------------|-------------------------|
| 1. Lobby/ Critique & Exhibition Area | 9. Corridor             |
| 2. Classroom                         | 10. Women's Restroom    |
| 3. School of Art Office              | 11. Men's Restroom      |
| 4. Art Faculty Office                | 12. Accessible Restroom |
| 5. Painting Studio                   | 13. Accessible Lift     |
| 6. Art Studios                       |                         |
| 7. Prep Room/ Storage                |                         |
| 8. Mechanical Room                   |                         |

**Foundation Building - Sixth Floor**



**Key**

- |                                           |                    |
|-------------------------------------------|--------------------|
| 1. Lobby/ Exhibition Area                 | 9. Accessible Lift |
| 2. President's Office                     |                    |
| 3. Architecture Study Collection/ Seminar |                    |
| 4. School of Architecture Computer Studio |                    |
| 5. Classroom/ Critique                    |                    |
| 6. Coffidor                               |                    |
| 7. Women's Restroom                       |                    |
| 8. Men's Restroom                         |                    |

**Foundation Building - Seventh Floor**

### **3.8.2 Description of any changes to the physical facilities either under construction or proposed**

Please refer to section 2.1.1, which details all recent and planned capital projects for the Foundation Building.

### **3.8.3 Hardware, software, networks, and other computer resources**

**The School of Architecture Computer Studio.** A faculty actively engaged in practice has brought both the realities and the potentialities of the digitization of architectural production into the studio. The School of Architecture has invested heavily in a computing facility on the seventh floor of the Foundation Building. It is specifically intended to support a design curriculum that recognizes the growing use of computing as an instrument of both theory and practice and which urges students to explore its formal and cultural implications. Students increasingly use the School of Architecture Computer Studio as integral to, not in lieu of, the design studios on the third floor. This computing facility is open an average of 17 hours a day and is staffed with “student monitors”, students trained to assist in the effective use of the facility and to do simple troubleshooting on hardware and to manage output.

The President’s Office has made The Cooper Union Computer Center, formerly administered by the School of Engineering, a division that reports directly to the vice president for business affairs. The CUCC now coordinates and administers information technologies throughout the college. A CUCC network engineer works directly with the School of Architecture to plan for the continuing evolution of the facility in support of our design curriculum.

The studio presently houses 16 Dell computers, including 4 high-end multiple-processor rendering stations, and 6 Macintosh dual-platform i-Macs, including 4 wide screen machines. In addition, 16 ports are available for laptop connection to the institution network, which allows for software use, access to the Samba server, library services, internet, etc. The CUCC seeks to maintain all workstations on an approximately 3 year replacement cycle. Five additional iMac workstations, configured for both OSX and Windows operating systems, are scheduled for installation in fall 2009.

A Linux environment Samba file server with 900 Gig capacity (mirrored for additional security) for temporary work storage and file sharing gives students access to secure data storage. This server will house a digital archive of aerial photographs, city maps (at different times in history), geological surveys, etc. that have been constructed or obtained by individual students for use on particular projects. These will be cataloged and stored on the Samba server to be available for use as a resource by students in the future for research and/or design work. Additionally, the School of Architecture Archive now collects student work digitally through its own folder on the Samba server.

The studio out-put capacity currently includes a high speed color printer, high speed black-and-white printer and two large format plotters: an HP 42 inch Design Jet color plotter, and a new HP 42 inch Design Jet 4500PS. Two additional large format plotters are located in The Cooper Union Computer Center at 41 Cooper Square, and are used by students of the School of Architecture throughout the year. An Epilog 36 EXT computer controlled laser cutter administered by the School of Art is located on the forth floor. A ZPrint 310 Plus 3D Printer and Powder Recycling Station were donated to the school in spring 2009 and are temporarily located on the third floor.

All software used by the students is upgraded as necessary to the latest version on a continual basis, in coordination with the Cooper Union Computer Center. Software now includes Autodesk's AutoCad 2006 and Architectural Desktop (other Autodesk products are included), 3d Studio Viz 4, Alias Wavefront Maya 5.0, Adobe Photoshop CS, Adobe Illustrator CS, Adobe Premiere Pro 7, Rhinoceros Nurbs Modeling,, FormZ Modeling 3.9.5. SketchUp Professional and Catia are available in the Cooper Union Computing Center drop-in facility at 41 Cooper Square.

All AutoDesk software can now be downloaded free to student laptops for use whenever they are connected to The Cooper Union network. This allows students to use AutoDesk on their own laptops in any computing studio in The Cooper Union as well as the library, dormitory and other informal study spaces.

**Two computing classrooms at 41 Cooper Square** are available for scheduling by the School of Architecture. One classroom is set up as a PC facility, and is equipped with all software native to a PC platform, including AutoDesk, Rhino and Maya. The second classroom is set up as a MacIntosh facility, and is equipped with Adobe and Apple software. Having access to these two classrooms allows the School of Architecture to develop its own facility more effectively for studio use, rather than as a facility that must also serve as a demonstration classroom. When not being used as classrooms, these facilities serve as drop-in studios for use by any student.

**The CUCC at 41 Cooper Square** maintains 40-45 PC workstations configured with software similar to that in the School of Architecture computer studio, as well as two high-speed large format plotters.

### **3.8.4 Identification of any significant problem that impacts the operation or services with a recommendation for improvement.**

The school continues to make the best use of the space assigned. It is anticipated that centralized scheduling and greater interaction between the schools will allow all divisions to make the most effective use of all space throughout the college.

Following the Middle States Self Study, an institutional Technology Committee was formed to develop a comprehensive technology plan for the college. This, along with centralizing administration of technologies, should result in improved coordination, communication and implementation of all information technologies. The CUCC network engineers have been overworked with the set-up of the new building, although our own liaison is very attentive to the particular needs of architecture students.

Students report poor maintenance of facilities. All classroom and pin-up spaces are now very heavily used, creating new urgency for maintenance and timely repairs. A "maintenance plan" will be developed with the Office of Buildings and Grounds to keep the facilities in good repair and in working order for healthy and productive study and learning.

### 3.9 Information Resources

The following report was submitted by Ulla Volk, Director, The Cooper Union Library:

#### **The Cooper Union Library Report to the National Architectural Accrediting Board, 2009**

##### **I. Context and Institutional Relationships**

The Cooper Union Library is the principal library for all of the college's educational programs as well as the institution at large.

##### **1. Administration, Location and Access**

The Library is primarily administered by the Library Director, who reports to the Dean of the Faculty of the Humanities and Social Sciences.

The Library is located on the ground floor of the Cooper Union's Foundation Building, the same building which houses the School of Architecture in its upper floors thus providing easy access for Architecture students and faculty to the library collections. The Library's collections include those of the Visual Resources Center and the Cooper Archives both administered by the Library as well.

##### **2. Peer Comparisons:**

Considering the size of the student enrollment in the School of Architecture (141 as of Fall 2008), the Library's architecture collection compares favorably to peer institutions in terms of funding, size and growth rate (see appended *Statistics Report*). It should be noted that the institutional allocation for books decreased substantially for FY2004 and FY2005 and has not since been brought back to prior levels. However, funding for periodicals and especially electronic resources has increased steadily.

In contrast to many peer institutions, the Cooper Union Library does not purchase multiple copies of individual titles. This policy was established primarily due to space constraints rather than lack of funds, yet it enables the library to stretch its budget across a wider range of publications. Since the architecture student enrollment is relatively small and the book loan period of two weeks is relatively short, the policy of one copy per title has not impeded the students' access to the books they need.

##### **II. Library and Information Resource Collections**

##### **1. Goals:**

The primary objective of The Library's Collection Development Policy (included on the Library's Web site) regarding the School of Architecture is to support its curricular program. By extension it is the goal of the Library to make information literacy and the development of critical evaluative judgment an invaluable part of a Cooper Architecture student's experience. To that end, the librarians are dedicated to developing the Architecture students' research and lifelong learning skills. The librarians teach the students research techniques and information evaluation criteria, so that they

may be prepared to select and apply the information necessary to address concerns of architecture throughout their careers.

The Library's *Mission Statement*, *Information Literacy Statement* as well as the *Collection Development Policy* are posted on the Library's Web site (documents included in appendix D)

Collection development of the Library's architecture resources whether in print, visual or electronic format, is the responsibility of the Director, the Art and Architecture Librarian, the Visual Resources Librarian and the Image Curator.

Selections of books, periodicals and electronic media for the architecture collection are primarily made by the librarians with input from the faculty, whereas digital images for the most part are added to the collection in response to faculty requests for specific items. In recent years the availability of films in DVD format has given the Visual Resources Librarian more opportunity to enrich the collection with titles other than those specifically requested.

The Library Director makes the final decisions concerning book, periodical, electronic media and visual resource selections and has the authority to approve expenditure of allocated funds.

## **2. Collection Description:**

### **a. Books:**

The Library takes pride in its excellent architecture book collection, which is shaped to serve the School of Architecture's mission, strategic plan and curriculum. The collection covers the history of world architecture, with a special emphasis on 19th to 21st century movements and contains substantial holdings on significant European and American architects such as *The Walter Gropius Archive*, *The Mies van der Rohe Archive*, *The Architectural Drawings of Alvar Aalto*, *the Louis I. Kahn Archive*, a 12- volume set of Frank Lloyd Wright's work and his *Selected Drawings Portfolio*.

Architecture from older eras is equally well represented including for example a sizeable collection of works on Andrea Palladio and Karl Friedrich Schinkel (notably *Collection of Architectural Designs*).

For historical study of Manhattan, *The Iconography of Manhattan Island, 1498-1909* by I.N.P. Stokes is an invaluable library resource as is for present time the *Sanborn Manhattan Landbook of the City of New York* with its detailed block-by-block real property maps.

The collection reflects the orientation and emphasis of the architecture curriculum as it has evolved since the early 1970s. Although history of architecture is strongly represented, resources relating to 20<sup>th</sup> century architecture, theory and criticism are the hallmarks of the collection. Within the last couple of years special efforts have been made to enrich the collection with studies of non-Western architecture. Urban Studies already well covered have been reemphasized in the selection process and the collection of titles on sustainable and green architecture as well as architecture and technology is growing steadily.

It should be noted that access to the collections of the **Research Library Association of South Manhattan** (the **Consortium** described below) and the extensive resources found in the

metropolitan area such as the Art and Architecture Research Division of the New York Public Library, the Stephen Chan Library of N.Y.U.'s Institute of Fine Arts, The Avery Architectural and Fine Arts Library of Columbia University, the New-York Historical Society and the museum and municipal libraries as well as archives in the New York metropolitan area provide faculty as well as students with comprehensive collections unmatched practically anywhere else in the world.

**b. Serials:**

Generally, the present serial collection is more than sufficient in coverage and scope to support the curriculum, and the holdings of the major architecture journals are complete and kept current. These journals also get bound for the sake of preservation and convenience for our patrons, a policy especially appreciated by scholarly researchers who marvel at finding so many titles in bound volumes from the inception of the journals in the open stacks. Although space for the serial collection is a serious issue, the Library has so far been able to accommodate the growth without resorting to off-site storage. Some titles of older nature – either discontinued or no longer subscribed to by the Library, are stored on the mezzanine level and retrieved on request. While the Library stays informed about new offerings of architecture journals in electronic full-text/image format whether by individual titles or in packages, cost is a major factor for the Library and we are weighing it against the advantages of the digital format for our patrons who would be able to access the journals in a password-protected mode via any computer whether on or off campus. Should more architecture serials become available in electronic format, it may prove a more cost effective solution rather than installing moveable shelving for the serials in order to accommodate the growing print collection or resorting to off- site storage.

**c.** The Library provides access to 59% of the Association of Architecture School Librarians' *Core List* in a combination of print and electronic formats either through individual title subscriptions or database packages such as *Wilson Select Plus*, *JSTOR Arts and Sciences III* and *V* as well as *Proquest Platinum Periodicals*.

The following architecture periodical indexes are available to our patrons in print and/or electronic format: *Art Abstracts*; *Art Index Retrospective*; *Avery Index to Architectural Periodicals*. *Architectural Publications Index* (formerly *Architectural Periodicals Index*) is available at N.Y.U.'s Bobst Library, one of the **Consortium** libraries.

Of the titles indexed in *Art Abstracts* 69 out of 415 titles (16.6%) are available in the Library in print and 131 are available via the full-text Web-format database *WilsonSelect Plus* (see below). The Library also has 175 (7%) of the more than 700 titles (278 in the current index) indexed in the *Avery Index* which the library now subscribes to in Web format.

**d. Visual and Non-Book Resources:**

The Library stopped making slides a couple of years ago and changed to a digital image production, which required an initial outlay for equipment, hardware and software. However, with the subscriptions to digital image databases that also include classroom presentation software, the need for in-house produced digital image production has subsided and consequently the required funding remains relatively steady. With a proliferation of films available in affordable DVD format the

allocation for these resources has not needed to be increased. However, the limited budget for films does not allow for the acquisition of the more expensive independent and art video productions.

The Library's Visual Resources collection consists (as of June 30, 2009) of 62,232 slides, 6,314 digital images, 219 films, 431 videos (tapes), 43 laser disks, 1144 DVDs, 2640 maps, several thousand pictures and sets of blueprints of campus buildings, including detailed plans by John Hejduk (former Dean of School of Architecture) for the renovation of Cooper's landmark Foundation Building. Architectural images account for 20,336 of the slides, 2,975 of the digital images and more than 40% of the picture collection. There are approximately 20 videos specifically on architecture, but it should be noted that the architecture faculty makes extensive use of non-architectural materials, especially digital images, films and videos. The map collection is used primarily by the architecture students working on site-specific projects.

The Visual Resources collection is not part of the **Consortium** agreement, consequently, only Cooper patrons have access. The records of the collection do not appear in BobCat, but they are posted on the Library's Web site.

Maps are regularly received through the Government Printing Office. Blueprints and pictures are not being collected at present. A database of digital images was developed several years ago with 24-hour access through the Library's Web site. These images are fully searchable by title, architect, location and subject matter. Study images on reserve for specific courses are posted on the Web site as well. However, due to copyright restrictions, these images are taken off line and archived after the end of each semester.

With our subscription to the comprehensive and expanding image database, **ARTstor** (see below) which we have been actively promoting, the faculty can now find most of the images they need there and prepare their lectures with the software it incorporates for classroom presentations. Our efforts to encourage the faculty to migrate to **ARTstor** have been successful with 2073 images posted in 2008/2009 on the **ARTstor** Web as reserve images compared to 826 last year. The Study Images page on the Library Website was not used at all in 2008/2009.

The Library keeps expanding and enhancing its list of electronic databases and e-resources. In order to provide wider access we have switched subscriptions as far as possible to the Web format, so that our patrons can access these resources whether on or off campus. Also, as far as feasible we are opting for full-text/image resources. These improvements have had budgetary ramifications, however, since wider access often translates into greater cost. Consequently, funds spent on databases and e-resources now far exceed the expenditures for books and periodicals in print.

The following is a partial list of the databases and e-resources relevant to architecture students and faculty to which the Library subscribes as well as some free e-resources provided to academic libraries by New York State.

The **Avery Index to Architectural Periodicals** with records dating from 1741 remains the primary source to searching for the content of architectural journals. We subscribe to the following H..W. Wilson indexes: **Wilson Select Plus** (contains full text articles from a subset of the Wilson indexes, including Art, Humanities and Social Sciences Indexes), **Art Abstracts**, **Art Index Retrospective**, **Applied Science & Technology Abstracts**, **Applied Science & Technology Index Retrospective**,

**Reader's Guide Abstracts, Humanities Abstracts, Social Sciences Abstracts.** The latter two indexes aid architecture students in their Humanities and Social Sciences courses as do **JSTOR Art & Sciences III and V** (an archive of scholarly journals with high-quality page images).

Other subscription e-resources also of relevance to Cooper's architecture program include, **Material ConneXion**, a global resource for innovative materials and **Safari Books**, which provides online access to books, videos, and tutorials to software programs. Both of these e-resources will be added to the subscriptions by September 2009.

To meet the constantly growing needs for digital images we have, as mentioned above, a subscription to **ARTstor**, a rich digital library of art images and descriptive information as well as the software tools to enable active use of the collections, including approximately 300,000 images covering art, architecture and archeology. **ARTstor** is a non-profit organization created by The Andrew W. Mellon Foundation. Development of the collections is ongoing, the product of a growing number of partnerships with individuals and institutions, such as the MoMA Architecture and Design Collection. In addition, we subscribe to **AP Images** which contains photographs, audio sound bytes, graphics and text from the Associated Press. The collection includes one million photographs dating back to 1826 and as current as a few moments ago. Tens of thousands of graphics, more than 4,500 hours of audio files dating from the 1920s, and news stories and headlines dating from 1997.

The Library also purchases Web access to a package of databases via OCLC FirstSearch. The subscription package includes WorldCat, the OCLC Union Catalog which contains millions of records for materials in member libraries around the world and is updated daily. ArticleFirst, an index to articles in thousands of journals, covering a wide range of subject areas. PapersFirst, an index to papers presented at worldwide conferences and symposia; and ProceedingsFirst, an index of papers presented at conferences, symposia and workshops and as PapersFirst compiled by the British Library Document Supply Center.

Through the New York Online Virtual Electronic Library (NOVELny) the Library has access free-of-charge to **Proquest Platinum Periodicals**, a periodical database covering a broad range of subject areas with approximately 2,000 titles, of these over 800 include full text articles. More than half of the included titles are scholarly/peer-reviewed.

NOVEL also provides access free-of-charge to a substantial number of newspapers, including *The New York Times* and *The Wall Street Journal*. The Library on its own provides access to *The New York Times* in a variety of formats. We also have a subscription to **The Historical New York Times** which includes searchable full text and PDF images for *The New York Daily Times* (1851-1857) and *The New York Times* (1857-2005). Coverage for later years is added according to schedule.

General e-reference packages include, **Oxford Reference Online: Premium Collection** with over 100 core reference titles from Oxford University Press, plus more than 50,000 additional in-depth, scholarly articles from titles in the Oxford Companions series and all 20,000 quotations from the Oxford Dictionary of Quotations. We also have electronic subscriptions to **Encyclopaedia Britannica Online**, the **Oxford English Dictionary**, **World Almanac** and the **American National Biography**.

#### **e. Conservation and Preservation:**

Substantial efforts are made to conserve and preserve the collection, which includes a wealth of older material that is deteriorating from acidic paper and glue as well as from environmental factors. Extensive in-house repairs are carried out following prescribed non-invasive preservation procedures and utilizing only acid-free products and materials. The Library uses its own equipment to encapsulate the covers of books that are too fragile to be rebound. We also laminate all new soft-cover books to extend their lifetime. Every year a great number of publications - monographs as well as serials - are sent to a commercial bindery for rebinding in an ongoing effort to extend and preserve their useful lifetime. However, due to budget constraints only a very limited number of publications will be sent for rebinding in FY2010. Publications that are still of significant value to the collection but too fragile to be circulated, rebound or repaired are placed in a readily accessible storage area on the Library's mezzanine level.

#### **Collection Development Policy**

The Library's Collection Development Policy which appropriately supports the mission, goals and curriculum of the Cooper Union was endorsed by the Library Committee after wider faculty input had been solicited. This policy is available on the Library's Web site as are other library policies.

### **III. Services**

#### **1. Reference:**

The Reference Desk is staffed throughout the Library's hours of operation by a professional librarian who assists students and faculty with their inquiries. The Art & Architecture Librarian, the Library Director (who served as the Art & Architecture Librarian for twelve years before becoming the Director), the Visual Resources Librarian and the Slide Curator each spend 10 to 12 hours per week at the Reference Desk. They are also available for consultation when not scheduled for reference.

The reference section in the Library provides an array of subject encyclopedias, handbooks, directories and other resources that are easily accessible in open stacks. Computerized reference services are primarily provided to researchers whose inquiries relate to material in the Cooper Archives. Recently, we added a link on our Web site to use for reference inquiries. However, it should be noted that Cooper patrons can find the answer to many of their reference inquiries through the resources and links posted on the Library's Web site.

#### **2. Information Literacy: Information Literacy Statement**

The Cooper Union Library's approach to information literacy is designed to meet the specific challenges posed by the structure of the institution. Its three degree-granting programs--art, architecture and engineering--are differentiated in philosophy and practice, and its offerings in the humanities and social sciences, including art history, are intended to supplement the students' professional studies. Once graduated, Cooper Union students are expected to approach their professional careers as artists, architects and engineers in a creative and innovative manner that

intrinsically demands research skills to stay current in their fields and to continue their professional and personal enrichment.

To that end, The Cooper Union Library applies the information literacy standards of the Association of College and Research Libraries (the general Higher Education standards as well as those developed for Science and Engineering/Technology), which detail the research, analytical and evaluative skills needed for the development of critical judgment, in ways that engage the demands of the curriculum while laying a foundation for lifelong learning. In library research instruction sessions and on an individual basis, Cooper librarians emphasize search strategy, research techniques, and criteria for the evaluation of information, enabling Cooper students to:

- Determine the nature and extent of the information needed.
- Retrieve information effectively and efficiently.
- Critically evaluate the collected information and revise initial query if necessary.
- Cite sources.
- Understand the economic, ethical, legal and social issues surrounding the use of information and its technologies as an individual or as a member of a group.
- Use information effectively, ethically, and legally to accomplish a specific purpose.
- Understand that information literacy is an ongoing process and an important component of lifelong learning.
- Recognize the need to keep current regarding new developments in his or her field.

### **Library Research Instruction:**

A series of instruction sessions is conducted each fall specifically designed for the freshmen architecture students to acquaint them with the Library, including its resources and services of particular relevance to their studies.

General orientation sessions detailing the Library's resources and services are scheduled for freshmen at the beginning of the academic year. The Library also offers course-specific library research instruction to hone the students' ability to locate, evaluate and utilize information. The goal is to equip students with skills that will allow them to work independently, efficiently and confidently in any library environment. The instruction includes searching techniques for the online catalog, BobCat, which encompasses the holdings of the **Consortium** libraries. Various reference resources and subject indexes, available at The Cooper Library in print or electronic format as well as Internet resources and specialized databases, are also covered. Handouts are regularly used to supplement what is taught in the instruction sessions and also posted as html documents on the Library's Web site. Printed guides are also available to aid in using the electronic resources.

### **3. Current Awareness:**

Two to three times per year the Library compiles lists of highlights of new titles to the main collection as well as the film and video collection. The lists are available from the Library's Web site. The Library also calls attention to new resources and services through the "What's New" section of its Web site as well as through flyers and occasional mass e-mails. Exhibits on specific topics are used to highlight aspects of the collections. New book acquisitions are regularly displayed.

#### **4. Access to Collections:**

**a.** All acquisitions of material for the collections are handled by the Library but the cataloging of books and serials with the use of the Library of Congress (LC) classification system and subject designations as well as the uploading into the online catalog, takes place at NYU's Bobst Library, the headquarter of the **Consortium**.

Computers to search for the Library's cataloged collection including material placed on reserve for specific courses are available throughout the Library.

The Library's book collection is arranged according to the LC classification system in open stacks on the main floor. The serials are arranged alphabetically by title and are likewise located in open stacks on the main floor.

The Visual Resources collections are located on the mezzanine level with no elevator access. In order to create barrier-free access and to facilitate the viewing of videos that are required for class assignments, additional video stations were installed on the main floor of the Library, so that students can study these videos in the evening and on weekends when the Visual Resources Center is closed. Computers outfitted with headphones on the main floor are also available for viewing the collection of videos in the DVD format.

Books on reserve for specific courses are shelved in a designated area off the Circulation Desk and available upon request. Photocopied course reserves, which are also listed in the online catalog, are kept at the Circulation Desk.

A Closed Stack area is maintained for material that needs special safeguarding due to rarity, high replacement cost, fragile physical condition or a history of frequent loss. This material is available for "room use only" upon request.

The Cooper Archives collection, available by appointment only, is located on the mezzanine level across from the Visual Resources offices.

#### **b. Circulation:**

Printed handouts of the general circulation policies are available in the library. These policies are also posted in greater detail on the Library's Web site with the most up-to-date information.

#### **Opening Hours:**

The Library is open approximately 70 hours per week, including weekends, when school is in session. Reference services are available throughout the hours of operation. During these hours, all library stacks and facilities - except the Visual Resources Center and the Cooper Archives, which are closed evenings and weekends - are available to students and faculty. It should be noted that Cooper students can also avail themselves of 24-hour study facilities at N.Y.U.'s Bobst Library, which is a 5-minute walk from the Cooper Union

### c. Database and Online Catalog Access:

The Library's Web-based resources are accessible in a password-controlled mode to Cooper patrons from off campus via a proxy server. We monitor database usage and make note of how often users could not gain access due to the pre-set limit of simultaneous users. So far instances of denied access have been minimal, also very few of our databases limit the number of simultaneous users. BobCat, the **Consortium** online catalog is available to anybody with Internet access.

### 5. Cooperative Agreements:

Since 1977, the Cooper Union Library has belonged to the **Research Library Association of South Manhattan**, a consortium of academic libraries whose members include New York University's major libraries and the New School Libraries (including Parsons School of Design Library). The primary functions of the **Consortium** are "to maximize resources by providing reciprocal borrowing and access privileges and using a shared online catalog and circulation system." The Cooper Union Library's participation in the **Consortium** has been a fruitful experience. It has allowed us to build our collection in support of the Cooper Union's degree-granting programs while giving our students and faculty access to the encyclopedic holdings of the **Consortium** libraries. Our architecture students make frequent use of the specialized libraries of the Institute of Fine Arts and the Parsons School of Design as well as the vast resources in the humanities and social sciences accessible at N.Y.U.'s Bobst Library.

The online catalog, BobCat, shared by the **Consortium** is available from dedicated terminals in the Cooper Union Library as well as through the Internet via the Library's Web site.

The Library is also a member of **METRO**, an organization of libraries committed to resource sharing within the New York metropolitan area. **METRO** membership makes it possible to refer our students and faculty to many specialized academic and private libraries, including Columbia University's Avery Architectural & Fine Arts Library, to which they would otherwise have no access.

### Document Delivery and Interlibrary Loan:

The increased access to citation indexes and to the Internet in general has produced greater demand for a variety of materials outside the Library's collections. In 1997 the Library acquired the hardware and software for **Ariel**, an electronic document delivery system, in order to decrease the cost and turnaround time of interlibrary loan (ILL) services. The **Ariel** software has since been upgraded regularly and the system enables the Library to scan journal articles and exchange with other libraries as well as receive them via the Internet. For material not readily available via Ariel, we continue to make use of commercial document suppliers, although the fees can be substantial. The Library absorbs most ILL fees.

The Library also makes use of OCLC for ILLs. The borrowing and lending of books are primarily handled through the electronic ILL subsystem of OCLC. In general, the Cooper Union Library lends more material than it borrows.

## IV. Staff

## **1. Structure:**

The Library Director is the manager of the Library. The Director reports to the Dean of the Faculty of Humanities and Social Sciences concerning library issues. The Library's budget is prepared by the Director and submitted to the Vice President for Business Affairs for preliminary approval followed by a meeting with the President. The Library is not administratively tied to the School of Architecture nor is the library staff part of the architecture program's educational team.

## **Numbers:**

The Library is staffed by ten full-time and several part-time employees as well as student workers. The small but highly dedicated staff has been successful in managing all aspects of the Library's collection and services. However, additional projects or a substantial enhancement of services, in particular expansion of the library research instruction program though desirable, would be difficult to achieve with the present staff size without curtailing current activities and services.

## **2. Professional Expertise:**

The professional librarian positions in the Library are all posted above entry level. Consequently, the professional staff has come to Cooper with substantial work experience. The five full-time librarians (including the Director) all have Master of Library Science degrees and all except one a second Master's degree in their specialty. The Art & Architecture Librarian, the Visual Resources Librarian, the Slide Curator and the Library Director all have subject expertise in architecture and art, as do two part-time librarians who work on weekends. The full-time librarians are governed by a union contract that covers the terms and conditions of employment of full-time faculty and librarians. The contract addresses issues such as job security and sabbatical leave for which librarians also are eligible. There are written job descriptions for the librarian positions. The Library has four part-time librarians who work only weekends. At times additional librarian help is brought in for special projects or when one of the full-time librarians is on sabbatical leave.

## **3. Support Staff:**

The Library operates with a support staff of five full-time paraprofessional and clerical employees in addition to several part-time circulation assistants, as well as student workers. The academic and job training requirements for the paraprofessional staff vary with the positions. However, generally a college degree is required and some appropriate work experience. Although, not requirements for the positions, the present Slide Curator and the Library Assistant both have MLS degrees. There are written job descriptions for the support staff, which is also unionized but in a separate union from the librarians.

## **Professional Development:**

Special efforts are made for the library staff to have time off to attend conferences and workshops. Funds are allocated in the budget to defray the cost of these activities. Also, a clause in the librarians' union contract allows for a portion of net tuition for professional development to be paid by the Cooper Union. Furthermore, this contract specifies that a pool of six hours per week be made

available collectively for the full-time professional librarians as release time for courses, seminars and/or workshops relating to their work. The full-time librarians are also eligible for a six-month sabbatical leave with full pay every six years.

#### **4. Compensation:**

The full-time librarians' as well as the professional and clerical staff's salaries are governed by their union contracts. The librarians' salaries are commensurate with those of others in the library profession. The professional and clerical staff salaries correspond with those of others in comparable positions in the institution.

### **V. Facilities**

#### **1. Space:**

The Library is located on the ground floor of the Foundation Building and is internally connected to spaces on the mezzanine level. The total interior of the Foundation Building was renovated in 1975 with John Hejduk, who was then the Dean of the School of Architecture, as the architect. The renovation provided ample space for the library collections then, but in the time since, despite added shelving, the Cooper Union Library has struggled to make room for expanding collections. To control growth, the Library has adopted a policy of adding only one copy per new title to the collection as noted in the Collection Development Policy. Careful weeding of the older collection is also necessary, and infrequently used material is moved to the mezzanine storage level, which only provides minimal storage space.

Considered one of Hejduk's major works, the Library's public areas are aesthetically very pleasing, with simple, clean lines and airy reading spaces. However, the staff areas are cramped and inadequate for activities such as acquisitions and processing of materials. Furthermore, there is no space in the Library available for group meetings other than the Director's office, which can accommodate only a handful of people. Consequently, not even the Library Committee meetings can be held in the Library.

Currently, there is a sufficient amount of seating and study areas in the Library with a mix of larger tables in the reading room and smaller ones for single seating dispersed throughout. The number of computer stations is also adequate. As mentioned above, some of the staff working areas are cramped for space, however, the furnishings there are generally satisfactory.

The Visual Resources Center is as mentioned located on the mezzanine level with no elevator access. However, the digital images collection can be accessed from computers in the public area and the DVDs and videos can be viewed at the stations in the reading room area.

The major portion of the Cooper Archives collection is kept in a separate room also on the mezzanine level across from the Visual Resources Center. However, a separate HVAC (humidity, ventilation and air conditioning) system for the room has not yet been installed and funding for it not forthcoming.

The Library staff workroom needs to be renovated to reduce noise levels, create more efficient work spaces for librarians and support staff, and to accommodate the increased wiring required for networking. Improvements should include a raised floor to eliminate the cables that are now laid across foot traffic areas. Areas for materials processing, reserve materials and closed stacks need to be expanded.

With the demolition of the Hewitt Building, the Library lost a storage area that was primarily used as a temporary holding place for larger donations that would take time to process. No such storage area has been provided since and will not be available in the New Academic Building. Presently, the Library is resorting to storing donations, excess shelving, etc. in the main reading room. Despite many pleas for finding more adequate storage space for the Library, nothing has been offered so far. As mentioned above, the Library does use space on its mezzanine level for the back-holdings of some of its periodicals and for lesser used or fragile material. Needless to say, with the annual projected growth of the library collection, a space for off-site storage of some of the collection will need to be found within the next five years.

## **2. Environmental Factors and Security:**

Lighting is inadequate in some sections of the stacks. The installation of indirect lighting that would bounce off the ceiling from the tops of the shelves would ameliorate this problem. Lighting could also be improved in the form of hanging or table lamps at the reading tables and in the McGraw Electronic Resources Center, where recessed florescent lights create significant glare on the computer screens. The Library is equipped with a sprinkler system.

During 2008 - 2009 a new HVAC system is being installed in the Foundation Building to conclusively fix the problems inherent in the previous system that often resulted in frequently fluctuating temperatures in major sections of the Library.

Basic necessities of electronic networking - outlets for Internet jacks and electric plugs - are also frustrated by the inflexibility of the Library's physical space. Although, the Library has been outfitted for wireless Internet service, this does not eliminate the need for electrical outlets. The use of laptops by our users has ballooned in the past five years, and the subsequent need for electrical outlets has increased as well, since battery life does not last through the course of a day. Lack of capacity for additional Internet connections also limits the number of staff workstations.

It is the Library's goal to work with Cooper's IT and the Buildings and Grounds staff to add the above-mentioned outlets at strategic locations throughout the Library's space, especially around worktables. The Library will also plan with the same departments to develop a safe, secure space to house sensitive network equipment.

### **Acoustics:**

Library's acoustics present problems. Voices carry readily throughout the main reading area and even the librarians' dialog with the patrons at the Reference Desk as they provide reference service, can be disturbing to others in the room. So far no viable solution to this problem has been found.

## **Security:**

A security guard is stationed in the lobby outside the Library to prevent unauthorized access to the building. The Library is adequately protected against fire with a sprinkler system and fire drills are held several times a year. Security cameras are installed in several areas to protect equipment and materials from theft. Also, the collection is protected from theft with a 3M security system and magnetic tapes. Currently, we do not have a formal written disaster plan but we have guidebooks that outline the proper procedures to follow should disaster strike.

## **3. Equipment:**

The Electronic Resources Center (ERC) on the mezzanine level of the Library provides twenty computers with Internet access and specialized research databases. The ERC workstation monitors are set under the desk surface beneath a sheet of glass and angled toward the viewer for ease of reading. This feature also allows the desktop to be utilized as a study area when the computer is not in use. In addition, the ERC is outfitted with a computer lectern and projection equipment for group library research instruction. A networked laser printer accommodates the computers in the ERC as well as computers in other parts of the Library.

In addition to the computers in the ERC there are three computers on the ground floor with Internet access for public use, five dedicated BobCat computers, two scanner workstations and a separate workstation for searching the back holdings of an engineering database on CD-ROM.

The Library has several servers to run resources accessed through its local area network (LAN) and to provide campus-wide access to its digital image collection.

Presently, the Library appears to have adequate computer facilities for student, faculty and staff use. All computers in the Library are upgraded as needed to run applications satisfactorily and extend their useful lifetime. When new computers are purchased, the ones they replace are as far as possible used for less demanding functions such as terminals to access the online catalog.

Last year the Library installed an additional scanning workstation in the public area in response to frequent requests to scan "room use only" books. The two scanners can both accommodate oversized books.

The photocopiers and the microfilm/fiche reader-printer, are adequate to meet the present needs of the public. Similar equipment for staff use, including a scanner, is equally sufficient.

## **VI. Budget, Administration, and Operations**

### **1. Funds:**

The primary source of funding for the Library's operations is institutional allocation. In addition, various state grants, endowments and gifts have also served as sources of funding for specific materials or projects. In recent years, funds have been adequate for a modest expansion of collections and services. However, the budget constraints instituted for FY2010 have significantly

diminished the funds the Library will have available for acquisitions and services this academic year. The Library Director has the primary authority for budget development and expenditures.

### **Evidence of Planning:**

Written goals and objectives for the Library's collections and services are contained in documents such as *The Cooper Union Library: Strategic Plan 2007 -2012*, the Cooper Union's Institutional Self-Study Report of 2007 which was prepared for the Middle States Association's accreditation; the School of Art's self-study report, which is being prepared during the spring and summer of 2009 for the NASAD Commission on Accreditation; the School of Engineering's self-study report submitted to ABET for its accreditation evaluation in year 2006 and in the Library's section of the School of Architecture's self-assessment report from year 2003 prepared for NAAB for its accreditation. The Library's above mentioned Collection Development Policy also outlines goals and objectives.

Several of the recommendations included in these documents concerning the Library have already been addressed and successfully implemented, and realistic plans are in place to accomplish others.

The Library's Web site has become a powerful tool for communicating information about our collections, services and policies and to provide access to our resources in a well-organized and structured manner. We pride ourselves of also having created an aesthetically pleasing site where the graphics of the pages work particularly well with the content. Improvements and enhancements in functionality, design and content of the Web site are frequently made, and we embrace the concept that our Web site will always be a work in progress.

The Library has developed relational databases and search engines for its slides and digital images collection, film and video collection and maps collection, respectively. Due to costs and other concerns we decided to make these databases an in-house project. However, with a small staff we realized that it would be difficult to set time aside for this work without curtailing other activities. Fortunately, the Visual Resources Librarian offered to make this the project of his sabbatical leave six years ago.

This summer the Library started an in-house digitization project of relatively small scale. The material that we are focusing on is a collection in the Archives of photographs from Cooper Union's 100<sup>th</sup> anniversary. We will be using a digital collection management software, CONTENTD that allows for upload, description, and access combined with search functionality of the digitized material. The collection will be posted on our Web site.

### **Intra-Institutional Relationships:**

The Library would welcome a closer working relationship with the School of Architecture administration and faculty. The Library Committee (described below) with a School of Architecture faculty representative does provide a forum for promoting a meaningful dialogue between the Library and the faculty and generally succeeds at this objective. However, other means of establishing more direct communication between the Library and the School of Architecture need to be explored.

Since collection-building is an incremental process, the School of Art, the School of Engineering and the Faculty of Humanities and Social Sciences have a librarian serving as an ex-officio member on

their curriculum committees, so that the Library can stay informed of planned changes in the curriculum. We would like to establish similar library representation on the School of Architecture curriculum committee or other appropriate venue to keep us informed. The Library Director met with the Dean and Associate Dean of Architecture in the Spring 2009 to explore improvements of communication between the School and the Library. Rather than library representation on the School of Architecture curriculum committee, the School's Associate Dean has offered to give reports to the Library Committee when it meets.

Concerted efforts have been made to solicit more faculty input with regard to collection development. In addition to talking to the faculty members individually or raising the subject in meetings, we also have easy-to-use forms to list recommended titles posted on the Web site.

As described above, the Cooper Union Library is a member of a library consortium. The Library Director serves on the **Consortium's** Integrated Library Management Steering Committee. The librarians also serve on **Consortium** committees pertaining to serials, circulation and reserves, technical services, and the OAPC.

## **2. Efficiency of Operations and Services:**

The Library prides itself on quick, courteous circulation services, succinct yet thorough reference interviews, and rapid turnaround time for acquisitions and processing of materials. Despite the small staff and long hours, there is always sufficient staff for essential operations at all times.

## **3. Participation of Faculty and Students:**

The Library Committee consists of elected faculty representatives from the schools of Engineering, Architecture, and Art, the Faculty of Humanities and Social Sciences, the Library and the Student Council. The Committee, which meets at least once per semester, has involved itself in an array of library issues, such as the collection development policy, periodical subscriptions, off-campus access to the Library's Web-based resources, information literacy, academic integrity, space, infrastructure and line of reporting.

The Student Advisory Library Committee, which has student representation from each of the degree granting schools, ordinarily meets once per semester to discuss library-related issues of concern to the students. It should be noted that the elected students canvas their fellow students prior to each meeting, so that the issues for discussion represent the concerns of the student body and are not limited to topics only of interest to the elected representatives.

## **VII. Conclusion:**

The collections and services of Cooper Union Library have changed dramatically since NAAB's last visit, yet it remains focused on the mission and goals of the institution at large. It has kept up with the rapid pace of technological change, yet it has not sacrificed its reverence for the book and the joy of print-bound knowledge. In the years to come, we predict that the Library will continue to loosen its ties to its physical locale, with many more of its resources accessible remotely and unrestricted by library hours, but readers will continue to find quietude and delight in the physical space enshrined by John Hejduk's lifelong love of books.

## **Collection Development Policy**

The primary objective of the Cooper Union Library's collection development policy is to support the college's specialized curricular programs in the degree-granting disciplines of art, architecture and engineering. Materials in the Humanities and Social Sciences are collected on an as-needed basis for individual courses.

Collection development is the responsibility of the director and the professional librarians, who are subject specialists in the above-mentioned fields, and who regularly consult review journals, publisher's catalogs, mailings and other announcements of new material. Their decisions are based on information derived from their participation on curriculum committees and their interaction with faculty and students, as well as their evaluation of the needs of the collection within the dynamic context of their subject areas. The following selection criteria are followed whether the material is to be purchased or donated:

- Relevance to Cooper's educational programs
- Scope, content and quality
- Indexing
- Strength of the existing collection and availability in Consortium
- Currency and timeliness
- Cost
- Preservation, maintenance and de-accessioning

### **Relevance to Cooper's educational programs**

As current or former members of the curriculum committees, the director and librarians are well-acquainted with the current curriculum as well as imminent changes and long-range planning. Therefore, they can anticipate and provide for current and future needs while shaping the collection. They also stay in close contact with the faculty and students within their specialized subject areas, and they actively solicit faculty requests for specific titles as well as general recommendations on the range and direction of the collection.

### **Scope, content and quality**

The director and librarians evaluate each potential acquisition in terms of its relevance to the needs of the students and faculty, its place within the existing collection and its intrinsic quality. A monograph is evaluated in terms of its scholarship and depth of research; the reputation of its author, publisher or sponsor; the caliber and fidelity of its illustrations; the thoroughness of its bibliographies and indexes. A new subscription to a periodical or index is initiated only if it provides sufficient breadth and depth of coverage of a given subject area while remaining of interest to the majority of library users working within that area.

### **Indexing**

A new periodical subscription is also evaluated in terms of the accessibility of its content, so it is highly important that the periodical under consideration is included in a major bibliographic indexing

and/or abstracting tool, such as the Avery Index to Architectural Periodicals, Art Abstracts or Applied Science & Technology Abstracts.

### **Strength of the existing collection and availability in Consortium**

Special care is taken to fill the gaps in the existing collection within the areas of art, architecture and engineering, and to build on the collection's strengths without creating redundancies.

Due to space considerations, duplicate copies of books are not purchased, and if donated, they are not added to the collection. Exceptions are made for material in high demand.

The holdings of the Consortium libraries are also taken into consideration during the selection process. If a title is considered important to the programs at The Cooper Union, the Library will acquire it even if it appears in a Consortium library's catalog. The Cooper Library relies on the Consortium primarily for material in disciplines for which the Cooper Union does not grant degrees.

### **Currency and timeliness**

For some disciplines, particularly engineering and the sciences, up-to-date information is of special significance. In those areas, preference is given to material that contributes new or revised information in a timely manner.

### **Cost**

Although budget is necessarily a factor in the selection process, the price of an item is always measured against its quality to establish its relative value to the Library's holdings. While some materials cannot be acquired due to fiscal constraints, the Library purchases a significant number of items relevant to the college's programs regardless of the cost.

### **Preservation, maintenance and de-accessioning**

Every care is taken to preserve the Library collection through rebinding and repair with archival-quality supplies. An item is de-accessioned only if its physical condition renders it unusable, if it is no longer relevant to the curricular needs of Cooper Union, if it has no extracurricular value or if it presents inaccurate or outdated information.

### **The Cooper Union Library Policy on Information Literacy**

The Cooper Union Library's approach to information literacy is designed to meet the specific challenges posed by the structure of the institution. Its three degree-granting programs - art, architecture and engineering - are differentiated in philosophy and practice, and its offerings in the humanities and social sciences, including art history, are intended to supplement the students' professional studies. Once graduated, Cooper Union students are expected to approach their professional careers as artists, architects and engineers in a creative and innovative manner that intrinsically demands research skills to stay current in their fields and to continue their professional and personal enrichment.

To that end, The Cooper Union Library applies the information literacy standards of the Association of College and Research Libraries (the general Higher Education standards as well as those developed for Science and Engineering/Technology), which detail the research, analytical and evaluative skills needed for the development of critical judgment, in ways that engage the demands of the curriculum while laying a foundation for lifelong learning. In bibliographic instruction sessions and on an individual basis, Cooper librarians emphasize search strategy, research techniques, and criteria for the evaluation of information, enabling Cooper students to:

- Determine the nature and extent of the information needed.
- Retrieve information effectively and efficiently
- Critically evaluate the collected information and revise initial query if necessary.
- Cite sources
- Understand the economic, ethical, legal and social issues surrounding the use of information and its technologies as an individual or as a member of a group
- Use information effectively, ethically, and legally to accomplish a specific purpose.
- Understand that information literacy is an ongoing process and an important component of lifelong learning
- Recognize the need to keep current regarding new developments in his or her field.

### 3.10 Financial Resources

#### 3.10.1 Comparative annual budgets and expenditures for each year since the last visit, including endowments, scholarships, one-time capital expenditures, and development activities

##### Architecture NAAB Survey For Fiscal Year 2005-2009

		FY2005	FY2006	FY2007	FY2008	Estimated FY2009**
1.	<i>Operating Budget</i>					
	Salaries (excludes Administrative salaries)	1,795,378	1,776,689	1,855,000	1,988,101	2,018,662
	Instructional Materials & Supplies	61,416	50,240	38,884	51,899	45,915
	General Administrative Expenditures	48,731	59,387	90,318	106,832	91,916
	Equipment (includes Repair & Maintenance)	11,283	18,666	13,075	5,850	8,293
	<b>Total</b>	1,916,808	1,904,982	1,997,277	2,152,682	2,164,786
	*above numbers include School of Architecture & Architecture Archive					
2.	Institutional Endowment (excluding Chrysler)	58,185,590	60,937,076	76,119,868	76,546,748	62,294,399
	Chrysler Building	221,000,000	416,000,000	525,000,000	530,000,000	420,000,000
	<b>Total</b>	279,185,590	476,937,076	601,119,868	606,546,748	482,294,399
3.	Chanin Fund Market Value @ 6/30	5,836,806	5,973,866	6,925,895	6,803,349	5,379,196
4.	Gwathmey Chair Funds Market Value @ 6/30	1,082,341	1,107,756	1,284,295	1,261,571	997,484
** FY2009 date are not yet available, used FY 2008 amount with a 5% increment						
<b>Total Education &amp; General Expenditures of The Cooper Union</b>		<b>35,405,000</b>	<b>37,153,000</b>	<b>41,936,000</b>	<b>43,111,000</b>	<b>45,361,000</b>

**3.10.2 Data on annual expenditures and total capital investment per student, correlated to the expenditures and investments by other professional degree programs in the institution**

**The Cooper Union for the Advancement of Science and Art Architecture NAAB Survey  
For Fiscal Year 2005-2009**

	FY2005	FY2006	FY2007	FY2008	Estimated FY2008**
<i>Comparative Data</i>					
<i>Relative to Other</i>					
<i>Professional Programs*</i>					
School of Architecture	20,600	20,034	22,489	23,899	25,094
School of Art	14,391	16,333	21,367	19,143	20,101
School of Engineering	32,559	33,943	41,111	40,216	42,226

\* Comparative data are provided based on "per student" rate

\*\* FY2009 date are not yet available, used FY 2008 amount with a 5% increment

**3.11 Administrative Structure**

**3.11.1 Institutional accreditation**

The Cooper Union for the Advancement of Science and Art is accredited by the Middle States Commission on Higher Education. The school submitted its Self Study to the Commission as part of its decennial reaccreditation review April 6-9 2008. The college's accreditation was last reaffirmed as of 26 June 2008.

**3.11.2 Description of the School's Administrative Structure and a Comparison with those of other professional programs in the Institution**

The Cooper Union is comprised of three professional schools: The Irwin S. Chanin School of Architecture, the School of Art and the Albert Nerken School of Engineering. The Faculty of Humanities and Social Sciences serves all students. Each of the Schools has its own Governance, budget, administrative structure and committee structure. The full time faculty of all schools and the librarians are represented by The Cooper Union Federation of College Teachers (CUFCT), a local chapter of the New York State Teachers Union/American Federation of Teachers, providing for some common policies on hiring, promotion and tenure. Since 2006, the staff of The Cooper Union have been represented by the Union @ Cooper Union, also a local chapter of the NYSTU/AFT. The schools are of different sizes and, as professional programs, have differing needs. Architecture averages 150 students, art averages 260 undergraduate students and engineering averages 500 undergraduate and graduate students. The School of Architecture enjoys adequate autonomy to assure conformance with all conditions for accreditation.

The dean, associate dean, administrative associate (full time), secretary (full time) and assistant to the deans for public programs (part-time) comprise the core administrative structure of The Irwin S. Chanin School of Architecture. The dean reports directly to the president of the college. The deans, supported by the staff of the archive and other administrative staff, are formally linked to the faculty and students through the committee structure defined by the governance. See also 3.6.2 and 3.6.4 for additional information.

A comparison with the administrative structures of the other professional programs at The Cooper Union for the 2008-2009 academic year follows.

### **The Irwin S. Chanin School of Architecture**

Dean  
Associate Dean  
Administrative Associate  
Secretary  
Assistant to the Deans for Public Programs and Research (part-time)  
Director, School of Architecture Archive  
Special projects Assistant, Architecture Archive (part time)  
Collections Assistant, Architecture Archive (part time)

### **The School of Art**

Dean  
Associate Dean (part time)  
Coordinator of Academic Operations  
Coordinator of Student Exhibitions and Special Projects  
Assistant to the Dean  
Administrative Assistant  
Coordinator, School of Art Admissions  
Administrative Associate, Office of Academic Advisement and Off-Campus Programs

Technical Staff, Supervisors  
Supervisor, Film/Video Facilities  
Supervisor, Painting/Drawing  
Co-Supervisor, Sculpture Shop (2)

The Center for Design and Typography  
Director  
Assistant Director  
Design Associate

The Herb Lubalin Study Center of Design and Typography  
Curator  
Archive Associate

The Saturday/Outreach Program  
Co-Directors(2)

The School of Art Computer Studio  
Director  
Senior Technician/Network Administrator

## **The Albert Nerken School of Engineering**

Dean

Associate Dean

Director of Safety, Campus wide

Advisor to First Year Students

Director, Assessment and Evaluation

Administrative Associate, Engineering Student Support, Dean's Office; Director-Outreach Program

Administrative Associate to the Dean

Administrative Assistant, Dean's Office; Assistant Director-Study Abroad Program

Secretary (3)

Audio Visual Resource Access Center

Multi-Media Specialist

The Cooper Union Computer Center

Director

Assistant Director of Telecommunications

Information Technology Support Specialist

Manager of Administrative Systems

Manager of the Brooks Design Center

Systems Software Engineer

C.V. Starr Research Foundation

Executive Officer (currently held by the Dean)

Director

Administrative Assistant

The Aba and Leja Lefkowitz Program for Professional Development

Director-CONNECT Program

Associate Director-CONNECT Program

## **Faculty of Humanities and Social Sciences**

Dean

Academic Advisor

Administrative Associate

Director, Center for Writing and Language Arts

### **3.11.3 Other Degree Programs**

The School of Architecture has accepted its first class for a post-professional Master of Architecture II program, open to students with and NAAB accredited degree or other equivalent.

Last spring, the School of Architecture received over 80 applications for its new degree program. The Master of Architecture II is a full scholarship, design research, post-professional degree program; applicants must have a first professional degree in architecture (Bachelor of Architecture or Master of

Architecture I) from a program accredited by the NAAB or equivalent accrediting agency in another country. The program will serve professionals who wish to continue in practice with higher research and design skills, prepare individuals who wish to develop parallel careers in teaching, and/or provide an opportunity to engage in research toward an appropriate Ph.D. degree at another institution.

The program began in fall 2009 with a class of 7 students. Students joining the program come from Greece, Israel, Spain, Taiwan, Turkey and the United States. Studio space for the Master of Architecture (post professional) program is on the third floor of the Foundation Building, along with all the undergraduate architecture students.

Following two semesters of design studio and seminar coursework, each Master of Architecture (post professional) student will complete a thesis during the final semester of the yearlong program, to be held during the summer session. The thesis presentations of the inaugural class will be held during the first week of classes of the 2010-2011 academic year, and will be open to all students and faculty of the school.

The school has noted the NAAB's "strong recommendation" to change the title of this degree program. We will work with the New York State Education Department to explore other degree titles that may be acceptable to them, and is possible within the terms of our existing charter.

### 3.12 Professional Degrees and Curriculum

#### 3.12.1 Titles of degrees offered

The Irwin S. Chanin School of Architecture offers one accredited degree program, leading to the Bachelor of Architecture degree.

#### 3.12.2 Curriculum of the Bachelor of Architecture Degree

The curriculum of the School of Architecture meets the NAAB distribution requirements.

<b>Courses (Prerequisites)</b>	<b>NAAB Credit Distribution</b>	<b>Credits</b>
<b>First Year</b>		
ARCH 111 Architectonics	Professional	8
FA 100R Intro to Techniques	General Studies	2
ARCH 114 Freehand Drawing	General Studies	6
ARCH 115 History of Architecture I	Professional	6
ARCH 118 Computer Applications and Descriptive Geometry	Professional	4
HSS 1 Literary Forms and Expressions	General Studies	3
HSS 2 Texts and Contexts	General Studies	3
MA 163-4 Calculus/Analytical Geometry	General Studies	6
<b>Second Year</b>		
ARCH 121 Design II	Professional	10
ARCH 122 Structures I	Professional	4
ARCH 125 History of Architecture II	Professional	6

HSS 3 The Making of Modern Society	General Studies	3
HSS 4 The Modern Context	General Studies	3
PH 165-6 Concepts of Physics	General Studies	4
<b>Third Year</b>		
ARCH 131 Design III	Professional	10
ARCH 132 Structures II (MA 163-4, PH 165-6, ARCH 122)	Professional	4
ARCH 134 Environmental Technology I	Professional	6
ARCH 135 Building Technology	Professional	4
Electives	Electives	6
<b>Fourth Year</b>		
ARCH 141 Design IV	Professional	10
ARCH 142 Structures III (ARCH 132)	Professional	4
ARCH 143 Construction Management	Professional	2
ARCH 153 Town Planning	Professional	4
Electives	Electives	12
<b>Fifth Year</b>		
ARCH 151 Thesis	Professional	12
ARCH 152 Structures IV (ARCH 142)	Professional	2
ARCH 154 Professional Practice	Professional	2
ARCH 205 Advanced Concepts	General Studies	2
ARCH 225 Advanced Topics	Professional	2
Electives	Electives	10
<b>Total Credits Required for B. Arch. Degree</b>		<b>160</b>
Professional Studies Credits		100
Required General Studies Credits (non-architectural content)		32
Elective Credits		26

#### Elective Notes:

The School of Architecture curriculum includes 32 credits of required coursework in general studies (non-professional coursework outside the discipline of architecture). In addition, students are required to complete 13 more credits of elective coursework outside the discipline of architecture, for a total of 45 credits. Of this 13, 6 credits must be taken in the Humanities and Social Sciences.

### 3.12.3 Examples of the minors that students may elect to pursue

The Faculty of Humanities and Social Sciences began to offer minors in four fields beginning with the 2008-2009 academic year. Students in good academic standing who complete a minimum of 15 upper-division credits in a specific field of liberal arts may qualify for a minor in that field of Humanities and Social Sciences. Minors are offered and will be designated on student transcripts in the following fields: American studies; art history; literature; history and society. Students develop their minor program with an advisor assigned by the office of the dean of Humanities and Social Sciences.

### 3.12.4 Minimum semester credit hours

Students are required to be registered for a minimum of 12 credits each semester. The average course load for a student entering as a freshman with no transfer credit is 16-18 credits each semester.

### 3.12.5 A list of courses required for professional content, and those required for general education

Courses Required for Professional Content:

ARCH 111 Architectonics	8 credits
ARCH 115 History of Architecture I	6
ARCH 118 Computer Applications and Descriptive Geometry	4
ARCH 121 Design II	10
ARCH 122 Structures I	4
ARCH 125 History of Architecture II	6
ARCH 131 Design III	10
ARCH 132 Structures II	4
ARCH 134 Environmental Technology I	6
ARCH 135 Building Technology	4
ARCH 141 Design IV	10
ARCH 142 Structures III	4
ARCH 143 Construction Management	2
ARCH 153 Town Planning	4
ARCH 151 Thesis	12
ARCH 152 Structures IV	2
ARCH 154 Professional Practice	2
ARCH 225 Advanced Topics	2
<b>Total Required Professional Credits</b>	<b>100</b>

Courses Required for General Studies/General Education

FA 100R Introduction to Techniques	2 credits
ARCH 114 Freehand Drawing	6
HSS 1 Literary Forms and Expressions	3
HSS 2 Texts and Contexts	3
MA 163-4 Calculus/Analytical Geometry	6
HSS 3 The Making of Modern Society	3
HSS 4 The Modern Context	3
PH 165-6 Concepts of Physics	4
ARCH 205 Advanced Concepts	2
<b>Total Required General Studies Credits</b>	<b>32</b>

### **3.12.6 Off-Campus Programs**

The School of architecture does not sponsor any off-campus programs. However, students may elect to take a leave of absence to pursue travel, study or work nationally or internationally.

## **3.13 Student Performance Criteria**

### **3.13.1 Overview of curricular goals and content**

The overall goal of the curriculum of the School of Architecture is to provide the student with a comprehensive educational experience, gaining knowledge and skills in preparation for the successful and responsible professional practice of architecture. Design studios and courses build cumulatively over the five years in order to establish a broad and deep foundation of knowledge in architecture and urban design in relation to developments in the sciences, arts, and technology. The curriculum stresses the importance of architecture as a humanistic discipline concerned with the design and construction of habitats in diverse social and ecological conditions, and their corresponding requirements for sustainability and ethical responsibility.

The five year professional program is framed within the context of a rigorous liberal arts education that includes a wide range of required and elective courses in the Humanities and Social Sciences, together with elective opportunities in the Schools of Art and Engineering, emphasizing the nature of architecture as a cultural, social, and technological practice intimately tied to the increasingly urgent questions raised by the man-made and natural environment.

#### **Year 1.**

The First Year is conceived as a broad introduction to society, culture, environment, and the nature, place and role of architecture in this context. The student is introduced to the principles and experience of drawing and representation in a broad range of media and formats: freehand drawing is taught side by side with projective geometry (hand constructed and computer generated), and other means of architectural representation. The Architectonics Studios encourage the investigation of space, structure, and form, as inflected by the occupation and movement of the human body, and situated in the context of environments from natural to urban. The two first units of the History of architecture sequence take the student through the global developments in architecture from Antiquity to the end of the Medieval Period, with special attention to non-western and traditional architectures. The First year of the Humanities and Social Sciences Core, emphasize the student's reading, writing, and analytical skills through the study of literary, historical, and sociological texts.

#### **Year 2.**

The Second Year advances the student's knowledge of architecture historically, culturally, and professionally. The Second Year Design Studios are dedicated to the examination, through analysis and design exercises, of the "elements" of architecture and their assemblage, including sites and its ecological conditions, program, spatial accommodation and organization structure and environment. The first segment of the structures sequence introduced students to the principles of architectural structure. The second two units of the History of Architecture sequence take the history of global architecture through the Renaissance to the present, with special emphasis on the complex environmental relations between increasingly industrialized and developing societies. The second year of the Humanities and Social

Sciences core, advances the students' knowledge of writing and analytic skills with in-depth courses in literature, history, and philosophy.

#### Year 3.

The Third Year is envisaged as a comprehensive experience of the discipline in design and professional knowledge, supplemented by a range of required and elective courses in environmental, technological, and humanistic subjects, forming an integrated introduction to the environmental, social, and programmatic understanding of design. The Third Year Design Studios build from analysis to synthesis, from analyses of total building assemblages and smaller-scale design exercises, to the development of a comprehensive design for a complex programmatic institution. To this end, the faculty responsible for the teaching of environmental technology, building technology, and structures join the design faculty as teachers in the design studio, with students bringing appropriate aspects of their design proposals for elaboration within the specialized courses. A broad spectrum of specialized courses, including Modern Architectural Concepts, Analysis of Architectural Texts, Landscape, Advanced Topics in Environmental Studies, History, Theory and Criticism, Advanced Concepts in the related arts and professional ethics, deepens the understanding of the profession, and its relationship to different cultures and environmental context.

#### Year 4.

The Fourth Year broadens the study of architecture, placing it within its diverse urban and rural contexts, with students gaining advanced knowledge of technological, structural, and professional concerns, the planning, zoning, social and cultural implications of architectural interventions. The Fourth Year Design Studios study the relation of institutional architecture to urban networks and infrastructures, public space, and typologies, from the investigation of rebuilding strategies following disasters, the role and nature of tall buildings, the nature of public and private institutions. The study of landscape is emphasized, both as large-scale natural environments and smaller scale site developments. Courses in the history and theory of Town Planning, Landscape, and advanced environmental concerns supplement the studios.

#### Year 5.

The Fifth Year is constructed around the student's development of their individual thesis project, and the in-depth study of professional practice in all its aspects. The year-long Thesis is divided into two stages over two semesters, with intensive research followed by a comprehensive design. The subjects of the thesis vary in scale and context, with the proviso that the student investigates a problem of fundamental importance to contemporary life and architecture, identified as a site for the intervention of design as an ameliorative construct. Overall the design thesis emphasizes the profound relationship of architecture to the broader problems of the environment and ecological sustainability, whether at the scale of desertification and rising sea-waters brought on by global warming, the provision of unpolluted water to developing communities, to the smaller scales of urban signification, mobility, and programmatic re-use. The course in professional practice surveys the questions of licensing, internship and IDP participation, and introduces students through site visits to a range of practices and public hearings.

### **3.13.2 Matrix cross-referencing each required course with the performance criteria it fulfills**

Please refer to attachment 3.13.2

## **4. SUPPLEMENTAL INFORMATION**

### **4.1 Student Progress Evaluation Procedures**

#### **4.1.1 Description of the procedures for evaluating student transfer credits and advanced placement**

The Admissions Committee places students applying for advanced standing (transfer students) in a particular year of the five-year design sequence as part of the offer of admission; this decision is final and cannot be reconsidered. Transfer students can be placed in Architectonics, the first year of the studio sequence, and must complete the full five-year design sequence in order to graduate.

The Administrative Associate acquires transcripts and course descriptions for each incoming transfer student and refers the student to the relevant faculty for review of all non-design studio coursework for possible transfer credit. For required professional architecture courses, transfer credit determinations are made by the faculty member teaching the particular course for which credit is sought. Similarly, the dean of the Faculty of Humanities and Social Sciences makes evaluations for all courses in the humanities and social sciences.

Incoming freshman who have completed advanced placement level calculus or physics courses in high school may receive credit or a waiver of the requirement as determined by the appropriate faculty in the School of Engineering who teach these courses and/or upon successful completion of a placement exam. The Associate Dean maintains an overview of the transfer credit policies with the other divisions of the college and makes evaluations for transfer architecture elective credits.

The policy for evaluating student transfer credits is mailed to incoming transfer students early in the summer prior to their enrollment.

#### **4.1.2 Description of the procedures or evaluating student progress, including the institutional and program policies and standards for evaluation, advancement, graduation and remediation**

Every summer each student receives a personal "Credit Evaluation Summary" prepared by the Administrative Associate of the School of Architecture. This summary clearly outlines the year-by-year curriculum of the degree program and indicates all coursework successfully completed by the student and all requirements yet to be completed, including distribution of electives. The Credit Evaluation Summary is updated after the drop-add period of each semester and after grades have been recorded. The Administrative Associate also reviews and approves each student's course selections prior to registration. Students out of sequence or behind in requirements are referred to the Associate Dean in order to develop an academic plan.

The following grades may be given to evaluate student work in classes and studios: A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F. Students are assigned Pass/Fail grades only for the first semester of ARCH 151 Thesis.

Students who earn a grade of less than "C" in Architectonics, Design or Thesis or achieve a GPA of less than 2.0 in any semester are automatically placed on academic probation. The Academic Standards Committee meets following the end of each semester after grades are recorded and reviews each student placed on automatic probation. The committee may confirm a student's academic probation, remove a

student from probation, place a student on final probation, dismiss a student or place a student on a required leave of absence. For all academic regulations, please see the attached Course Catalog.

Students must have a cumulative GPA of 2.0 for graduation, and must complete all requirements outlined in the curriculum.

**Center for Writing and Language Arts.** Individual tutoring and small group workshops in writing are offered to assist students at all levels of work in the Center for Writing and Language Arts. The center employs an average of 11 highly qualified writing associates and writing fellows each semester.

As part of new student orientation, all students attend a program on writing at the college level and write diagnostic essays. Each essay is reviewed and ranked by a team from the center to identify students who might struggle with academic work. These students receive focused support from faculty in their HSS classes, are encouraged to work one-on-one with a writing associate, and are monitored by the associate dean. Students with English as a Second Language issues are assigned to ongoing sessions with tutors who have expertise in this area, ideally meeting with their tutors three times per week.

Those students identified with development and writing issues are also assigned to ongoing sessions with senior associates meeting three times per week. These students are tracked through grades and regular reports prepared by writing associates that are sent to the students and appropriate faculty members.

The required course Physics PH 165-6 is offered during the summer for students unable to complete the course at the designated time in the curriculum (whether due to academic, scheduling or sequencing conflicts) during the normal academic year and for first-year students who wish to reduce their second-year course load.

Repeating any required courses that a student fails to successfully complete is considered a form of remediation. For students whose difficulty in completing course work is due to emotional/financial difficulties, the Office of the Dean of Students provides necessary help. Students are encouraged to meet with their faculty to determine additional study to improve performance.

## **4.2 Studio Culture Policy**

### **The Irwin S. Chanin School of Architecture of The Cooper Union**

#### **Statement on Studio Culture**

Central to maintaining a creative environment for intellectual investigation and intuitive exploration are the shared design and computer studio spaces on the third and seventh floors of The Foundation Building.

From the Architectonics faculty:

"Educational institutions are the stewards of discipline, they are the crucibles in which the living form of a discipline is transferred through the generations. Many forms of resource are marshaled toward animating this stewardship; the primary resource, in fact the meaning and purpose of education, lies in the community of teachers and students at the heart of an institution. Young minds filled with endless possibilities come searching for a sanctuary in which they can be inspired, strengthened and tempered by listening to and

working with voices of wisdom, knowledge and experience. There is no higher calling for an educational institution than the stewardship and advocacy of this community.

The particular modes of knowledge that form the discipline of architecture are to a large extent embodied knowledge; they are acquired through a combination of intense study and present tense creativity. The education of an architect requires a studio culture that encourages the faculty and students to explore their creativity in teaching and learning, it requires crafting and maintaining an evolving studio environment that cultivates the personal imagination. Individual creativity within a willing community is a profoundly transformative act. As each moment contains the potential for reinvention, "school" is not a means to a predetermined end, but rather it is a place for significant works, for research and exploration, a place of creative urgency, for people and their works to listen to each other. Great educational institutions are great communities: physically, geographically and intellectually, the studio is the center of the community at the School of Architecture. The myriad personal and public exchanges that form our studio culture lead to new ideas, new forms of expression and movements of thought that ultimately enrich our discipline and our humanity."

In the studios, students work together as a community of individuals. Here, students and faculty from all years engage in a process of rigorous inquiry, discussion and critique, freely sharing knowledge, ideas and methodologies. Students study the principles and works of Architecture that have contributed to the betterment of the human condition in the development of their own projects. Students of the upper years serve as mentors for the lower years. Diversity and balance are critical values in generating an academic ambiance where humanistic ideals and ethical views serve as a constant reference for individual growth and development. The social and intellectual environment thus created is considered a vital part of the students' experience at The Cooper Union. Students are required to be present in studio for all hours that their Design studio meets, and to develop their work in the Studio.

Students must be aware of and observe all policies and conditions for the use of the studios, including hours of access. Studio use policies and responsibilities are distributed at the beginning of each academic year. The school does not support the idea of continual 24-hour studio access. Studios are generally open Monday to Thursday 8AM to 2 PM, Friday and Saturday 8AM to midnight, and Sunday from noon until 2AM.

### **Academic Year 2009-2010 Architecture Studio Use Policies and Responsibilities**

It is intended that all students enrolled in the School of Architecture study and work in the School of Architecture studios as a community of individuals. The studios are your personal workspace as well as a laboratory shared by others, a place of dialogue, debate and serious work where the needs of scholarship and respect for others should inform all activity. In the studio, your commitment to your own work as well as the community of the school should be evident at all times. The use of the studios is a privilege, and failure to work responsibly and respectfully in the studio may result in the loss of this privilege.

Please familiarize yourself with the following policies, as you are required to observe them:

The studios are to be free of drugs and alcohol at all times: the storage, consumption, or exchange of alcohol or drugs is absolutely and unequivocally prohibited.

Smoking is absolutely prohibited in the studios and throughout the building at all times.

Fire lanes in the studio are clearly marked and must be kept absolutely clear of all furniture and materials at all times. In addition, do not store materials in the areas in front of the entryways or at the south end of the studio. This is absolutely necessary for the safety of all and compliance with this important regulation will be

monitored by the Safety Director of The Cooper Union. Materials left in the fire lanes, the entryways or at the south end of the studio will be removed from the studio by Buildings and Grounds.

Building closing times must be observed for the safety and well-being of all. Adequate sleep is critical to maintaining good health. It is your responsibility to be aware of building hours and to observe all closing times throughout the entire academic year.

Information about the use and storage of hazardous solvents and chemicals is now provided in a red binder, which will be kept in the studio adjacent to the sinks. Please do not remove this binder. Store all flammable and toxic materials in the yellow "hazard" storage cabinet at the north end of the studio. Do not have open containers of hazardous chemicals or solvents at your desk and do not store these materials in your locker.

Do not spray ANYTHING in the studios or anywhere else in the building. Use the High-Ventilation Room in the 4th floor Sculpture Shop that is accessible whenever the Foundation Building is open.

Do not hang any curtains, drapes, or other fabric in the studios. Do not bring upholstered furniture of any kind into the studios. These are fire hazards and will be removed and discarded.

Do not build any structures or enclosures around or over your desk. These are a potential fire hazard and they contradict the ethos of the studio community. Partitions and storage lofts will be immediately removed by Buildings and Grounds.

Cooking and the use of hot plates or coffee makers are prohibited. These activities pose extreme electrical and fire hazards. The Student Council maintains a hot water urn for use by all students located adjacent to the sinks at the north end of the big studio.

Be considerate of the close proximity of your colleagues; use earphones whenever playing a radio or other sound-producing device or instrument.

Do not use power tools in the studios or classrooms. Use the 4th floor Sculpture Shop. Keep all personal power tools in your locker.

All floor receptacles should be in good working order. Use those in your immediate work area. Extension cords or electrical cords cannot cross a fire lane for any reason. In addition, do not run extension cords into the lobby or hallway. Extension cords used improperly will be removed and will not be returned. If any floor receptacle appears damaged or does not function, please inform the School of Architecture Office immediately.

Bicycles are prohibited in the School of Architecture and there is no bicycle parking inside the Foundation Building. Bicycle racks installed in front of the Foundation Building are available for student and faculty use. DO NOT chain bicycles to the fence of Peter Cooper Park - they will be removed by the NYPD. Additional bicycle racks in 41 Cooper Square may become available.

Do not open locked windows. Opening windows disrupts the proper balance of the HVAC system.

Do not adhere anything to the doors of the studios or to the walls or floor surfaces outside the studios. Do not glue, staple or nail anything onto any wall surface. Use pushpins (at pin-up boards) or drafting tape only.

The roof of the south portico is off limits at all times. The roof surface is easily damaged.

Keep your work area clean. Use marked trash receptacles to separate and dispose of metal and wood scraps (to be recycled), garbage (in the LIDDED containers) and regular trash. Do not keep open containers of food in the studios. Rodents have become a serious problem in recent years, and are attracted by food.

The School of Architecture Student Council has recommended that sanctions be imposed on students who violate policies for studio use. The following procedure is now in effect:

- A student will receive a formal written warning from the Associate Dean, copied to the Student Judicial Committee, for the first (of any) violation.
- A student will receive a \$50.00 fine for the second (of any) violation during the academic year.
- A student will receive a \$50.00 fine for the third (of any) violation during the academic year AND will be required to meet with the Dean of the School of Architecture as well as the Dean of Students for possible disciplinary sanctions, including probation, suspension, or dismissal, for the third or subsequent violation.

### **4.3 Course Descriptions**

Please refer to attachment 4.3

### **4.4 Faculty Resumes**

Please refer to attachment 4.4

### **4.5 Complete copy of the previous VTR**

Please refer to attachments 4.5 for the Visiting Team Report and 4.5.1 for the 2007 Focused Evaluation Report.

### **4.6 Annual reports and NAAB responses to annual reports**

Please refer to attachment 4.6

### **4.7 School Catalog**

To access the main website of The Cooper Union go to:  
[www.cooper.edu](http://www.cooper.edu)

To access the Course Catalog of The Cooper Union go to:  
[www.cooper.edu/administration/registrar/catalog.html](http://www.cooper.edu/administration/registrar/catalog.html)

