University of Pennsylvania
School of Design
Department of Architecture

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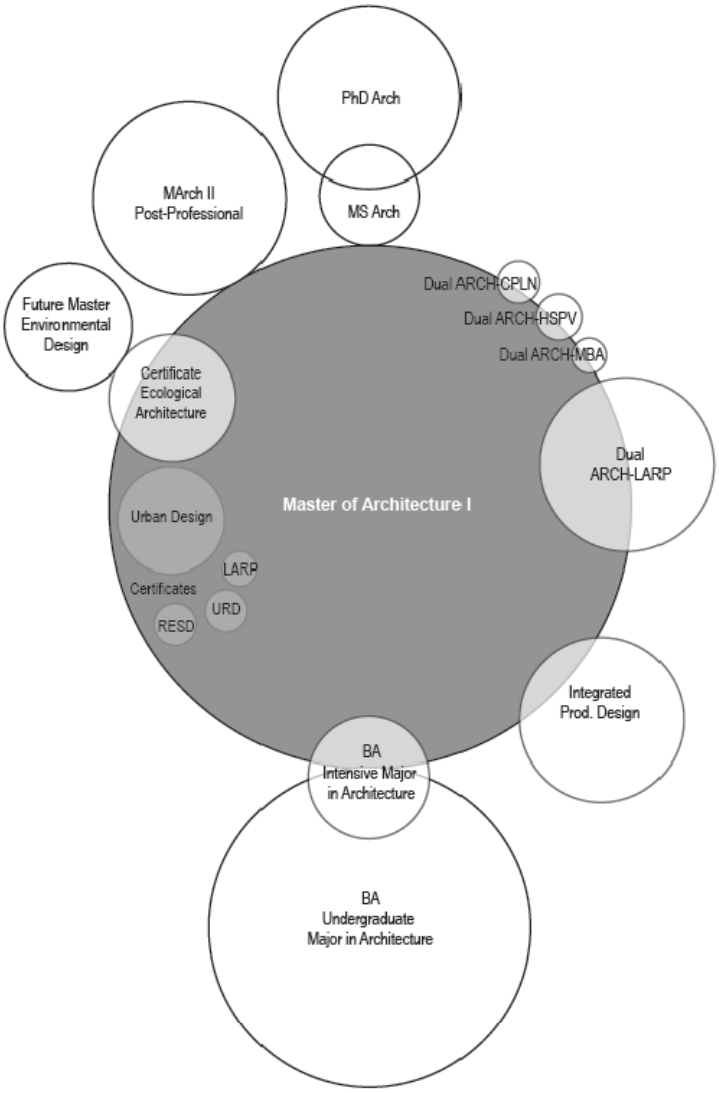

Dr. William W. Braham, FAIA, Interim Chair, Department of Architecture
Julie Beckman, NAAB Accreditation Coordinator
Dionysias Petrakis, Department Coordinator

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PART ONE. INTRODUCTION TO THE PROGRAM

1.1 History and Description of the Institution

1.1.1 The University of Pennsylvania

Benjamin Franklin founded the University of Pennsylvania in 1740. Originally called the College of Philadelphia, it was established as the nation's first University in 1791. Teaching at the University was guided by Franklin's call for practical education. Throughout its history, the University has emphasized practical knowledge as an important aspect of human understanding. The original College of Philadelphia was located in a metropolis of the British colonies; it was an urban university, unlike its early contemporaries Harvard and Princeton, both established in village settings. By the end of the century, however, its original center city site was no longer capable of accommodating its growing activities and size. For greater space, the College trustees purchased the house erected for the President of the United States, and had its architect, Benjamin Latrobe, add to it a medical amphitheater. In this building two of the nation's most important architects, Robert Mills and William Strickland, learned their professional skills. Later, Strickland enlarged this building, and in the coming years he and Mills built additional buildings for the College in the immediate vicinity. In 1872, the University of Pennsylvania moved to a new location, where it could expand without impediment. It relocated to a site that would grow to include 247 acres in West Philadelphia across the Schuykill River from the historical city center.

The academic structure of the University comprises four undergraduate schools and twelve graduate and professional schools. It is one of the country's largest private universities, with over 1700 faculty members and 22,000 students equally divided between undergraduates and graduates. The Department of Architecture exists in one of these twelve schools, the School of Design (PennDesign), with approximately 500 graduate students. It includes the departments of Architecture, City and Regional Planning, Fine Arts, and Landscape Architecture and Regional Planning, as well as programs in Historic Preservation and Urban Design.

The Professional Degree Program in architecture exists within the Department of Architecture of the School of Design at the University of Pennsylvania.

1.1.2 The School of Design

Excerpt, Gary Hack, School of Design, External Review, Spring 2008

The School of Design has a long and distinguished history. Courses in architecture were first taught at Penn in 1868, making it the second program in architecture in the US. The School of Fine Arts was established in 1890, containing architecture and art, and over the years its programs have changed, but the centrality of art and design have remained consistent.

In the 1950s, under the leadership of G. Holmes Perkins, the school was reorganized with professional education moved to the graduate level. Undergraduate programs were phased out, and the school became the Graduate School of Fine Arts. It attracted internationally renowned faculty, and was responsible for shaping the direction of architecture, landscape architecture and city and regional planning. It created an influential civic design program, and in the 1980s, it played an equally formative role in developing the field of historic preservation. One of its distinguishing characteristics over the years has been a faculty that combines distinguished scholars and influential practitioners, making tangible the commitment to linking theory and practice.

Over the past dozen years, the school has undergone a number of equally profound changes. The Fels Program in Government Administration was moved out of the school to the School of Arts and Sciences. Undergraduate teaching was greatly expanded and now constitutes 1/3 of course enrollments, and new undergraduate majors were created in fine arts, architecture, digital media design and visual studies. Cross disciplinary work was encouraged through dual degrees and certificate programs, and today more than 20% of students enrolled in these. New types of non-degree educational programs were established, including the Center for Urban Redevelopment Excellence (CUREx) fellows program. Several new research centers were established, and PennPraxis was created to serve as a vehicle for faculty practice.

Recognizing the importance of practitioner educators to the schools educational mission, new faculty ranks and titles were created including Professor of Practice, Associate Professor of Practice, and Senior Lecturer. These have allowed the school to make multi year commitments to distinguished practitioners, and individuals essential to our educational program.

In view of the broadened mission of the school, its name was changed in 2003 to the School of Design.

Description of the School

The School of Design is one of 12 schools of the University, overseen by the Board of Trustees, President and Provost. Each school is a largely self-governing entity, with wide latitude given as to how its activities are structured and there is considerable variation among them. Each school has a board of overseers, appointed by the trustees, with responsibility for ensuring that programs are of the highest quality possible, and supported with the resources necessary to achieve this.

Broad authority for the management of schools has been delegated to deans, within the framework of general rules relating to appointments and faculty and administrative responsibilities that have been codified in the handbook for faculty and administrators. All appointments, promotions and grants of tenure for standing faculty (tenured or tenure track) or appointments of non-tenure track faculty to multi-year appointments must be approved by the provost and trustees, based on recommendations by the dean. The provost convenes a provost's staff conference, consisting of deans and others to advise him on these decisions. The council of deans, led by the provost, meets regularly to discuss university issues, as does the president's consultative committee consisting of deans and university administrative officers.

Penn's operating model is responsibility center management (RCM). In short, all resources that come to the university flow into one of the responsibility centers (the 12 schools plus independent centers such as the Institute for Contemporary Art, University Museum, etc.), and all expenditures flow from these centers. Over 90% of the endowment of the university is controlled by the responsibility centers. Funds for central functions, such as the costs of the president's and provosts activities, campus grounds maintenance, security, libraries, athletics, etc., are largely paid for through a set of charges and taxes levied on the schools and independent centers. All schools are responsible for paying directly for operations and maintenance of their facilities (and raising funds for new facilities), all educational and administrative costs, and graduate financial aid.

The decision on the composition of the faculty, number of students, and internal organization is left largely to the schools. There are no permanent faculty lines, only resources that are fungible. When faculty retire or leave, the dean must decide whether to refill the position, create a different type of position (e.g., practitioner educator vs. standing faculty), or restructure the responsibilities. Student enrollment targets are set annually by the deans and department chairs, and budgets are constructed accordingly.

The faculty of the school meets monthly to discuss educational activities and policies, and approve any new or changed curricula or courses. An executive committee, consisting of the department and program chairs, chairs of the graduate groups, directors of the undergraduate programs, the associate dean and assistant dean, meet monthly to make policy and advise the dean on issues. The school has three standing committees: a personnel committee that reviews all personnel actions proposed by departments and makes recommendations to the dean; the curriculum committee that reviews all new or changed courses and curricula, and makes recommendations to the school faculty; and a committee on academic freedom and responsibility that meets only when charges are made against faculty and administrators that need to be arbitrated (no such issues have been raised over the past 12 years). The COAFR also conducts elections for faculty members to serve on the dean search committee. The dean appoints members of the personnel and curriculum committees, and the policy has been to rotate membership of the committees annually. The COAFR is elected by the faculty.

The school offers professional degrees at the graduate level in five fields: architecture, city and regional planning, fine arts, historic preservation and landscape architecture. Faculty in City Planning also offer the Master of Urban Spatial Analytics program (MUSA).

PhD programs are offered in architecture and city and regional planning. These are administered through graduate groups that include faculty in the home department and in other departments in the school and university. The architecture graduate group also offers the opportunity for one year of specialized study, obtaining an MS in Architecture.

At the undergraduate level, it offers majors in architecture and fine arts to students enrolled in the School of Arts and Sciences. It also offers minors in architecture, landscape architecture and fine arts. Faculty in the school also teach in the undergraduate urban studies program.

The department of fine arts also collaborates with the School of Engineering and Applied Sciences and the Annenberg School of Communication in offering an undergraduate major in digital media design. The department of fine arts also offers a major in visual studies, jointly with the department of psychology and the department of history of art and architecture. The department of architecture collaborates with the School of Engineering and Applied Sciences in offering a new master's program in integrated product design.

In addition to degree programs and majors, the school offers a variety of certificate programs. Most are designed to be taken concurrently with degree programs, although students may enroll as special students and pursue a freestanding certificate. Currently, certificate programs are offered in urban design, real estate design and development, graphic design, time based media design, ecological architecture, landscape studies, historic preservation, historic conservation and urban redevelopment.

In Spring 2008, there were 515 students enrolled in professional masters programs in the school, 38 in PhD programs, and 203 majors in the undergraduate programs that we oversee or collaborate with others in offering.

1.2 Institutional Mission

1.2.1 The University of Pennsylvania

Excerpt, President Amy Gutmann, Penn Compact, 2004-2009

The Penn Compact is our vision to propel the University of Pennsylvania from excellence to eminence in all our core endeavors of teaching, research, and service. Three principles inform the Penn Compact: increasing access, integrating knowledge, and engaging locally and globally. Since 2004, when I was privileged to become Penn's eighth president, Penn's teamwork and innovations in these areas have propelled the University's growth and served as examples to institutions all over the world. President Amy Gutmann

Increasing Access

We must make an excellent Penn education available to all outstanding students of talent and high potential who can benefit from and contribute to our University. In a democracy and at great universities, diversity and excellence go together. To keep them together, we must significantly boost scholarship aid to make Penn even more affordable to exceptional students from all backgrounds.

Growing Diversity.

Our undergraduate student body is more diverse than ever before and the number of under-represented minorities in the student body has grown from 11 percent to 13 percent.

Integrating Knowledge:

The most challenging questions and problems of our time cannot be addressed by one discipline or profession. To comprehend our complex world, we must better integrate knowledge from different disciplines and professional perspectives in our research and teaching. Beginning with the recruitment of eminent scholars who will hold joint appointments in two schools and departments, Penn will achieve a truly successful partnership between arts and sciences and our professional schools that will benefit our students, our society, and our world.

Penn Integrates Knowledge (PIK) Program.

In 2005, Penn launched the innovative "Penn Integrates Knowledge" (PIK) program to recruit the best teacher-scholars whose work crosses traditional boundaries. To date, eight PIK Professors, who each hold joint appointments in two Penn schools, have been generously endowed by Richard C. Perry (W'77), David M. Silfen (C'66), Andrea Mitchell (CW'67) and Alan Greenspan, and CraigW. Effron

(W'81).They are invigorating the University's community of scholars and students and positioning Penn

Engaging Locally and Globally:

Through our collaborative engagement with communities all over the world, Penn is poised to advance the central values of democracy: life, liberty, opportunity, and mutual respect. As we prepare to expand Penn's campus to the east, we strengthen our ties with our neighbors and help drive economic and technological development throughout the City and Commonwealth. At the same time, we will share the fruits of our integrated knowledge wherever there is an opportunity for our students, faculty, and alumni to serve and to learn

Service Learning. Penn—one of only three schools nationwide to receive the Presidential Award for General Community Service—supports distinguished programs that allow students to integrate service activities into their academic work. More than 4,000 Penn undergraduates (more than 40 percent) already engage in sustained service and help strengthen communities in concert with their studies.

Penn's Global Reach. Penn is the school of choice for students from around the world. Students from abroad currently comprise 14 percent of undergraduates and international student enrollment has increased 20 percent since 2004; enrollments from China and India are up 50 percent.

1.2.2 The School of Design

Excerpt, Gary Hack, School of Design, External Review, Spring 2008

The School of Design is dedicated to improving the quality of life through the design of artworks, products, buildings, landscapes and cities. We use "design" in the broad sense to include both creating stimulating objects and places and influencing the social, political and production processes that have a bearing on the built and natural world. The design arts are the common intellectual core of the school, but equally important are the understandings drawn from technologists, historians and social scientists in the school and university.

Our concerns are at once practical and aesthetic, honoring the precepts of Benjamin Franklin. We are part of Franklin's university that seeks to advance knowledge *and* have an immediate impact on its world.

As a professional school, we prepare individuals for practice in each of our disciplines: architecture, fine arts, landscape architecture, city and regional planning and historic preservation. We also educate professionals to work in areas that cross disciplinary lines, including urban design, real estate design and development, conservation of historic sites, graphic design, motion graphics and animation, digital media design, urban spatial analytics, urban redevelopment practice, and product design. We aim to increase the general understanding of art, design, architecture and urban issues through our undergraduate education programs, public events and exhibitions, and dialogue about emerging issues. And we prepare individuals for teaching and advanced research, through our PhD programs.

1.3 History of the Department of Architecture

Excerpt, Detlef Mertins, School of Design, External Review, Spring 2008

While architects were associated with the University since its founding in 1740, the idea of establishing a Department of Architecture and associated arts was not raised until the 1850's. The trustees considered forming a Department of Mines, Arts and Manufactures in 1852, and its curriculum was to include courses in "sketching and plan drawing." This plan was abandoned amidst a national recession and the Civil War. In 1868 the University established the Department of Arts, which was later renamed the Department of Science. Architecture courses were taught in the Department of Arts in 1869, making architecture at the University of Pennsylvania the second oldest program in the United States. Thomas Webb Richards both headed the initial program and designed the first building constructed on the University's West Philadelphia campus, College Hall, a commission he won in an open competition in 1870. The direction of the program was next assumed by Theophilus Chandler, who also became president of the A.I.A., the first of many University of Pennsylvania graduates to assume this position. Chandler developed and expanded the program, bringing such figures as Frank Furness, Wilson Eyre, Walter Cope and John Stewardson onto the faculty. In 1890, the

School of Architecture achieved independent status as the Towne Scientific School of the University offering a four-year undergraduate architectural program. Many of the early professors of architecture in the program were trained at the Ecole des Beaux-Arts and the ateliers and clubs they established in Philadelphia provided a broad professional framework for architectural education in the program. The T-Square Club was founded in 1883 as a break-way organization from the Philadelphia A.I.A. Close connections were established between the program, the A.I.A. and these clubs and ateliers. Warren Powers Laird, one of the Beaux-Arts trained architects who became a professor in the program, shaped the curriculum in the manner of the Beaux-Arts method. The emphasis was on design through competitions and preparation for professional practice. One of Laird's colleagues, Paul Philippe Cret, emphasized architecture as a creative art. During these years the program sought to balance the concerns of artistic expression with the increasing demands of professional competency.

The arrival of G. Holmes Perkins in 1951 was a turning point in the program's history. Under his leadership the disciplines of architecture, landscape architecture, and city planning were consolidated into a GSFA. In 1956 he established the Civic Design Program, later re-named Urban Design, as a joint program between architecture and city planning. As both Dean of the GSFA and Chairman of the Department, Perkins assembled a distinguished faculty including Lewis Mumford, Robert Le Ricolais, David Crane, Ian McHarg, Erwin Gutkind, Robert Geddes, Louis Kahn, Romaldo Giurgola, Robert Venturi and Denise Scott Brown. Many of these faculty members were instrumental in developing the movement in architecture known as the "Philadelphia School." During the recent decades, the Department has expanded its facilities, increased the number of its faculty and students and modified its curricula and courses in response to contemporary developments in architectural practice, theory and pedagogy. It remains closely connected to the City of Philadelphia, the University of Pennsylvania and the GSFA.

1.4 Mission of the Professional Degree Program in Architecture

Excerpt, Detlef Mertins, School of Design, External Review, Spring 2008

The primary mission of the Master of Architecture Professional Degree Program is to educate architects through the development of disciplinary skills, knowledge, and methods of inquiry for the professional practice of architecture. Architecture is understood as a modality of creative expression within a culture and a material product realized within the techno-economic and socio-political domains of contemporary civilization.

The Professional Degree Program aims at a disciplinary education in architecture incorporating the traditional subjects of design, representation, technology, and theory with the contemporary topics of digital media, economics, and professional practice. While disciplinary in its orientation, the program encourages engagement with the related disciplines of fine arts, historic preservation, landscape architecture, urban design, and city and regional planning. Finally, the program extends architecture beyond these related disciplines into the realms of culture, civilization, and society. The goal of the program is to develop skills, knowledge, and methods of inquiry in the discipline of architecture while encouraging an interdisciplinary understanding of the environment and fostering professional ethics and social responsibilities.

Education in the Professional Degree Program is centered in the design studios, providing students with opportunities to learn from projects that vary in content and context and emphasize different aspects of architecture. Required and elective courses explore the knowledge and methods of inquiry in architecture in a wide range of traditional subjects and contemporary topics. Students learn representational skills and technological knowledge as part of a unified architectural design process. Theory is considered as a means towards developing an understanding of architectural production in a cultural and historical context. Issues of programmatic content and contextual concerns are seen as opportunities to explore appropriate and meaningful form, as potential sources of inspiration in architectural design.

Our department provides an open, collegial and supportive environment for faculty and students to develop expertise, think laterally, and experiment creatively. We prepare graduates to be leaders in the profession and contribute to society and culture at the highest level.

VISION:

A LABORATORY FOR EVOLVING DESIGN IDEAS, EXPERTISE AND CAPACITY FOR ENGAGEMENT

A THINK TANK FOR EXCHANGES AND DEBATES WITHIN AND ACROSS DISCIPLINARY BOUNDARIES

A BROADCAST CENTER FOR ENGAGING A GROWING AUDIENCE AND INTERNATIONAL NETWORK

Over the next five years, we will deepen our capacity to engage the challenges of society locally and globally by evolving the expertise of architecture, integrating across fields to create new knowledge, skills and modes of practice.

Architecture is experiencing an extraordinary renaissance in practice, fuelled by many different sources: new technologies and materials; information technology; advances in engineering and manufacturing; globalization of culture, education and practice; crossovers with the sciences, visual arts and other design fields; a growing audience for design culture in general, and ecological architecture in particular; and a focus on creativity and innovation in leading schools around the world. At the same time, society faces many challenges, including global warming and environmental change, pollution and waste, transition to new energy and resource economies, the redistribution and reorganization of political and economic power worldwide; globalization of the construction and development industries; population growth, shrinkage and migration; urban intensification and attrition; privatization of public sector activities; and the transformation of cultural identities and social institutions. We seek to bring the expansion of expertise and creativity in architecture to bear on these challenges.

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

1.5 Program Self-Assessment

The program has developed considerably since the 2004 accreditation visit, with a number of curricular changes, shifts in the student population, additions to the faculty, and the development of new research units. A narrative assessment of those changes is provided below.

Curriculum

Design Studios. In the Fall of 2004, digital media was made an integral part of the first semester design studio. This resulted, in part, from the increased digital capabilities of incoming students and from a recognition that computers were no longer discrete tools, but had become the "media" of design. New introductory projects have been developed, though the basic sequence of short projects has remained consistent. However, as a result of the introduction of digital media into arch 501, the visual studies sequence 521, 522, ad 621 was adjusted, as were the design studios that followed it.

The changes in the visual studies sequence were quite direct at one level, but with the development of even more advanced digital techniques in the upper level studios, the amount of material to be learned has increased steadily, and a great deal of studio time was spent teaching various modeling and generation techniques. Beginning in the summer of 2009, incoming students without a strong digital background received a one-week, intensive digital preparation course to allow the design studio to focus on design, and the visual studies course to focus on concepts.

The second effect of the shift of digital media into the first year, was on the design studio where digital media had previously been introduced, Arch 601. With the shift of digital training away from that semester, that studio was refocused first on technology, which had been the long-standing theme of that semester, and then on ecology, which has been a growing expertise within the program.

A secondary effect of the shift in the first year was the realization of a long-standing proposal to develop a more tightly coordinated, integrative design studio in the fourth semester, Arch 602. It had long been recognized that the focus of Arch 601 was divided between the realization of larger scale building and the integration of technologies. The integrative 602 studio was first realized in Spring 2007 and was based on a number of specific features. First was the focus on the integration of building technologies, demonstrated through comprehensive sections and 3D assemblies. Second was the use of expert consultants as regular contributors to the studio. And third, developed as a requirement in 2008, was that students work in teams of 2-4 students on projects, making collaborative design a key aspect of the studio and allowing greater resolution of the designs.

With the completion of the change in Arch 602, Arch 601 was more explicitly focused in 2008 on urban dwelling, allowing it to engage on the overall resolution of more complex building, and the detailed resolution of individual units.

With that most recent adjustment, the required studio sequence has settled into a new pattern, with two semester of Foundation Studio, moving from the topics of order and assembly of 501 into a direct encounter with urban conditions and complex programmatic demands of 502. That is followed by two semesters of Core Studio, moving from the topics of organization and inhabitation of arch 601 into 602, with its emphasis on collaboration and integration of technologies.

In the upper-level, Research Studios, Arch 704, we have been exploring arrangements to deepen or extend the agendas of the studios by linking them in Topical Units with preceding or parallel courses or with faculty research units. For example, students are encouraged to take the fall seminar, Form and Algorithm, in preparation for Balmond's spring studio. Similarly, connections were established between the Kieran Timberlake studio focused on Bangladesh and a seminar on Asia. In Spring 2010, the Behnisch-Haas studio will have a dedicated parallel seminar taught with the members of Transsolar.

Technology. The formal structure of the technology sequence has remained constant since 2004, with the 3 course streams of structures, construction, and environmental systems (531-536) converging in case studies (631) and then branching into specialties in the designate electives (632 & 638). However, considerable effort has been devoted to the introduction of digital simulation techniques in that sequence, with initial sessions in the first year courses converging in dedicated sessions in 631, and then studio based sessions in 602. The technology faculty has identified two challenges for the sequence, the first is the busyness of the first year,

which seems only to increase as new requirements or ambitions are added. The second was highlighted by the difficulties encountered with the enhancement of simulation techniques. The discrete nature of the three technology courses seems at odds with the increasingly integrated demands on the profession and even with the synthetic understanding required for meaningful simulation studies and design generally.

History-Theory. The sequence of required courses in history-theory has evolved by degrees over the last 5 years. Arch 511 has focused more fully on the history of modernism, to help articulate and make evident the historical and theoretical basis for the new design techniques. Arch 512 is more topically organized and has focused on the city, while Arch 611 covers contemporary theories and their historical roots. In a staged two year adjustment, the content of Arch 611 will be moved to Arch 512, allowing for a full review of modernism to contemporary architecture in the first year, with Arch 611 addressing the core architectural topics in coordination with the 601 studio. Many faculty believe that current students are not as versed in either historical or theoretical topics, making it harder for them to make arguments for their work or to position thir work relative to other developments in the field. The newly added writing requirement in studio addresses part of this concern, and another proposal to add a requirement for a history-theory elective will be reviewed by the faculty this year.

Workshops. Since 2004, a new variety of popular and demanding courses have been developed, which can best be described as workshop or design technique courses. These are upper level seminar courses that follow a problem-based-learning approach similar to design studios and visual studies. They are typically dedicated to specific design or software techniques, and/or specific kinds of design subjects, ranging from Digital Fabrication to Furniture Design to Experimental Form. The courses sometimes rival studios in their forms of production and time-commitment, and raise the interesting questions about evolving formats of design instruction.

Professional Practice. Since 2004, there have been a number of refinements and staffing changes in the professional practice courses, especially 671 and 672, to get students more actively into different kinds of firms and to bring practitioners into the classrooms. That has also been coordinated to some degree with the offerings of Career Services, who have increasingly brought alumni practitioners to speak to graduating students. That convergence has raised the possibility of a formal internship requirement in the professional degree program, which would enable more direct links between professional practice courses, career services, and work in the profession. The faculty has decided to review and consider this possibility in more detail this year.

Dual-Degrees and Certificates. The number of students participating in dual degree programs, especially with the Landscape program, grew dramatically in 2004, and now regularly constitutes about 15% of the department. The freedom of students to use their electives across department and school boundaries has also enhanced their ability to pursue certificates, and another 15% of students now also pursue certificates.

Certificate in Ecological Architecture. In 2007, the faculty voted to approve a new certificate program in Ecological Architecture, and it was made available in the 2007-08 school year, with 12 students accepted in the first year. In the School of Design, certificates require 5 CUs of courses not otherwise required for the degree. The certificate has two required courses, one of which was offered specifically for the certificate and a selection of elective courses from other departments and schools in the University. The success of the certificate has led to the development of a new Master program, which is proceeding through the approvals process in Fall 2009.

Integrated Product Design. Beginning in Fall 2008, the Department began supporting a new, one-year, jointly offered MSE degree program in Integrated Product Design. It is offered jointly with the School of Engineering and Applied Science (SEAS) and the Wharton School of Business. The Architecture department provides the design courses for the program, and has mounted three new courses to support the initiative, Arch 403, Design Fundamentals, Arch 728/729, Design of Contemporary Products, and Arch 727, Industrial Design. The degree can be achieved by students in the MArch with one additional semester of study. Four MArch students are currently pursuing the combined degree.

Students and Admissions

Since the last accreditation review, the average number of applicants has nearly doubled, and the program eliminated an awkward, single-semester form of advanced standing. The quality of the students has also improved, with the most dramatic shift occurring in those applicants with undergraduate majors or studies in architecture. By 2008-09, between 70% and 80% of the students entering the first year of the MArch had undergraduate majors in architecture. This added many strengths to the program, especially studio skills, and changed some of the emphasis in the 500 studios, but the faculty decided that students with other undergraduate majors added important elements to the program as well. The admission procedures were adjusted last year, and the current incoming class is divided roughly 50/50 between those with and without undergraduate majors in architecture.

The program has increased the numbers of under-represented minority students, especially among Latinos, but has struggled to increase the number of Black students. The newly developed 3 diversity scholarships have been used almost exclusively to attract talented Black students to the program, but even with full scholarships, we are competing with other schools for a small pool of students. More effort needs to be devoted to developing relationships with schools outside Penn's traditional relationships.

Faculty

The faculty has also grown since the last visit. With the retirement of Joseph Rykwert, the Cret Chair was made available and Cecil Balmond of Arup was appointed to the Chair as a Practice Professor in 2004. He has taught a seminar and a studio each year since that time, and started a research unit, the Non-linear Systems Organization. Balmond was reappointed for another 5 year term in 2008-09.

In 2004, and then 2009, Enrique Norten was reappointed as Practice Professor. In 2008, Winka Dubbeldam was reappointed and promoted as Practice Professor. In 2007, Marion Weiss was promoted to Full Professor.

In 2009, the Miller chair was converted to support visiting faculty, and will be used in the 09-10 acdemic year to support the joint appointment of Stefan Behnisch and his partner, Martin Hass, to teach a 704 design studio and parallel studio.

Since the last accreditation visit, 4 new assistant professors have been appointed. Helene Furjan was appointed in 2006 to teach courses in history-theory. In 2008-09, 4 new assistant professors were appointed with one deferring until 2010. Franca Trubiano was appointed to teach in the area of construction and integrated practice, a position for the Department had sought to fill since before the last accreditation visit. Simon Kim was appointed to teach in visual studies and design techniques and Yun Kyu Yi was appointed to teach in environmental systems. All four assistant professors will also teach in design studio.

With the latest appointments, the Department is closer to its target size for standing faculty of 17, which would represent 50% of the teaching and administrative responsibilities in the program. With the phased retirement of Peter McCleary a new appointment in the area of structures may be necessary, and the Department faces the enduring challenge of maintaining enough Design faculty on the standing faculty to provide the leadership and curricular oversight. The Practice Professors have provided an important vehicle for bringing top designers into the program, but they have had time to contribute as much to the leadership.

The next search will be for a new faculty member to assume the role of Chair.

Research Units

Since the last accreditation visit, the TC Chan Center for Building Simulation and Energy Studies has grown out of the Building Simulation Group and developed into a large research and consulting unit with a growing staff. www.design.upenn.edu/bses/intro.swf. The success of the Chan center have contributed to the MArch program in a number of ways. Most immediately it has provided a source of summer and part time jobs for many MArch students interested in extending their environmental expertise. It has also increased the expertise available for courses and studios in this area, and has grown symbiotically with the development of the certificate in ecological architecture. It is expected that this will continue to be a growing strength of the program.

Cecil Balmond made it a condition of his appointment at Penn that he be able to develop a research unit that could both continue the work he had developed

in the Advanced Geometry Unit (AGU) at Arup, and extend it in areas not possible for the AGU. The Non-linear Systems Organization (NISO) has realized both those ambitions through a series of research fellows and close collaboration with specialized courses. It has also mounted a series of high-profile events exploring the questions raised by that research.

Facilities

The School has sought to secure a new building for nearly a decade, and instituted a variety of renovations in 2004 that improved the public spaces. Studio renovations were begun again last year, upgrading the desks to more mobile, adaptable configurations. However review space is increasingly under pressure, presenting regular scheduling problems, and probably constitutes the first limit to growth for any new initiatives in the Department.

Outreach and Promotion

The Department experienced a period of visible growth and innovation under the leadership of Detlef Mertins, achieving a higher profile and broader level of awareness. A new, annual document of student WORK was developed, as was an on-line gallery with a space for each student and course. Regular outreach with those vehicles has helped increase the number of applicants to the program.

Conclusion

The program has grown and prospered over the last five years, increasing its applicant pool, adding to the faculty, expanding the range of degrees and certificates, and adding or intensifying research units.

The curriculum has been steadily adjusted to adapt to changes from within and without of the program, but more remains to be done. Following a preliminary review in 2008-09 the faculty identified three areas of the curriculum that need review: History-theory, Visual studies and Design Techniques, and Technology and Simulation. In each area the content and sequencing need to be reviewed, and then the coordination or integration with the studio sequence will have to be examined.

From the broadest perspective, the challenges from within and without seem to lead toward integration of various kinds, which challenge the conventional division of subjects. The design studio remains the exemplary site of integration and problem-based-learning, while subjects like visual studies and performance simulation are converging and collapsing the distinctions between older categories.

PART TWO – PROGRESS SINCE THE LAST SITE VISIT

2.1 Summary of Responses to the Team Findings

The Visiting Team Report of 2004 identified the following deficiencies. Our progress since this report is discussed with respect to each numbered item.

2.1.1. Responses to Conditions Not Met

Item 12.14. Accessibility

Ability to design both site and building to accommodate individuals with varying physical abilities.

Visiting Team Assessment: Accessibility is minimally evident in the work product of the core curriculum including site and building execution.

Update: Measures have been taken to incorporate this condition in the second year design studios. In Fall 2008 the Arch 601 design studio was re-focused on urban dwellings to allow greater resolution of building organization, egress, and accessibility. For Fall 2009, the requirement for the resolution of egress and accessibility in design has been made explicit, and the code materials concerning egress and accessibility will be distributed to all students.

Item 12.24. Building Code Compliance

Understanding of architects' legal responsibilities with respect to public health, safety, welfare; property rights, zoning and subdivision ordinances; building codes; accessibility and other factors affecting building design, construction, and architecture practice.

Visiting Team Assessment: While there is evidence of introductions to zoning and building codes in coursework, the integration of life-safety concerns as an important regulatory component in studio projects is minimally evident.

Update: Measures have been taken to incorporate this subject into the second year design studios, to complement instruction in courses in technology and professional practice. See note for item 12.14 regarding the intensification of egress and accessibility in the arch 601 studios.

Item 12.28. Technical Documentation

Visiting Team Assessment: The visiting team did not find evidence of the precise technical description or documentation necessary for purposes of review or construction.

Update: Measures have been taken to incorporate this condition in visual studies and the second year design studios and in technology courses. The arch 602 design studio is now coordinated studio focused on Integrative Design. One of the requirements for all sections of the studio is a resolved and detailed section and 3 dimensional description of the construction of the final project.

Item 12.30. Program Preparation

Visiting Team Assessment: The team saw no direct evidence of comprehensive program writing and analysis.

Update: Program interpretation forms an important part of studios 501, 502, and 601. There is no comprehensive program writing exercise as there was with the mandatory design thesis, but Arch 502 in particular addresses the formalization of the studio brief as a result of a focused analysis of the city and neighborhood.

2.1.2. Responses to Causes of Concern

The visiting team found no causes of concern.

2.2 Summary of Responses to Changes in the NAAB Conditions

The one substantial change in NAAB conditions since the last accreditation is the studio culture policy requirement. A new policy and process has been initiated.

PART THREE – COMPLIANCE WITH THE CONDITIONS FOR ACCREDITATION

3.1 Program Response to the NAAB Perspectives

The programs approach to the five NAAB perspectives are as follows.

3.1.1 Architectural Education and the Academic Context

The University of Pennsylvania and the School of Design, located in West Philadelphia, provide a rich and distinctive academic environment appropriate for an education in architecture. The University and the PennDesign support and foster the extension of the academic and scholarly fields of architectural study into other disciplines. Additionally, the city's numerous libraries, museums, galleries, and other institutions of higher education contribute greatly in student education.

University policies and procedures provide the framework for each of PennDesign 's respective Department's faculty appointments, the admission of its students, and the administration of its resources. The University also provides a context that supports the academic mission and professional concerns of each Department within PennDesign, allowing its faculty and students to extend their study and research into other disciplines, by means of University faculty and resources. In addition to PennDesign, there are several other professional schools within the University including: the School of Medicine, School of Engineering and Applied Science (SEAS), the School of Law, the Annenberg School of Communications, and the Wharton School of Business. Students take elective courses outside the PennDesign in one or more of these professional schools. In addition, students may choose to take courses in Art History, Philosophy, American Civilization, etc. within the University's School of Arts and Sciences.

PennDesign is one of twelve schools within the University. There are four Departments, several interdisciplinary programs, and two Graduate Groups within GSFA. The departments are: Architecture, City and Regional Planning, Fine Arts, and Landscape Architecture and Regional Planning. In addition to the four departments, the School offers an interdisciplinary program Historic Preservation. There are two Graduate Groups in the School of Fine Arts: one in Architecture and the other in City and Regional Planning. The Graduate Group in Architecture offers the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees. For students in the Master of Architecture degree, there are a variety of 4 year, dual-degree programs available with Masters programs in Landscape Architecture, City Planning, Historic Preservation, and with the MBA at the Wharton School, as well as a new simultaneous-study arrangement with the Master of Science in Engineering in Integrated Product Design, which can be accomplished in 3 ½ years. There is also a wide variety of 5 course certificates available across the school, of which Real Estate Development and Urban Design are among the more popular.

Some faculty in the Department of Architecture teach in other programs within the PennDesign including the Undergraduate Program, Landscape Architecture, Historic Preservation, and Urban Design. Faculty from other disciplines within the PennDesign, as well as from the School of Arts and Sciences, are members of the Graduate Group in Architecture. Some of the faculty in the Department co-teach or cross-list courses in the Wharton School of Business.

3.1.2 Architectural Education and the Students

Students participate directly in the affairs of the Department in two ways: service on faculty search committees and participation in the PennDesign Student Council. There is a single, elected Studio Representative from Architecture on Student Council, who in turn organizes the selection of studio representatives from each design studio in the program. These studio representatives meet regularly with the Chair, the Studio Coordinators, and the faculty to discuss pedagogical and studio life issues.

Students also serve on the Department's Lecture and Events committee, which identifies, invites, organizes, and hosts lecturers from all over the world. The committee is chaired by a faculty member, but is otherwise managed by students, who gain direct experience of architects and scholars of many different kinds. PennDesign has also recently revived the school journal, VIA, as a student run book series with a faculty advisor. VIA enables students to conceive, solicit articles, edit, and produce a high-quality design publication.

Since 2006, PennDesign has supported a Black Student Alliance, who meet regularly with the school and departmental leadership, and have organized a series of events to assist in the recruiting of minority students and to explore issues related to their experiences in the school and professional communities. The BSE has organized an annual event connected with the Spring open house, to help demystify Penn admissions. They have also organized a remarkably high-quality annual conference called Unspoken Borders, bringing minority designers and scholars from across the country.

3.1.3 Architectural Education and Registration

Architecture as a profession is governed by laws that protect the health, safety and welfare of the public. The fundamental subjects of study in the Department include design, representation, technology and theory. Considerations of health and public welfare are incorporated into the educational objectives of the Department's design studios and courses. The procedures of the Intern Development Program (IPD) are explained in the professional practice courses.

3.1.4 Architectural Education and the Profession

The Professional Degree Program in architecture is the first stage of preparation for a career in architecture. The principles that form the backbone of architectural practice, as well as provide a foundation for continuing self development, are emphasized throughout the program's curriculum. From the Department's foundation studio, to the research studios, the Department prepares students who have an ethical responsibility to society, their clients and colleagues. Those topics are addressed explicitly in a series of professional practice courses, that seek to understand different kinds of practices, and practitioners, and the ethical and business reasons for those differences.

3.1.5 Architectural Education and Society

With today's diminishing resources, architects must contemplate difficult questions concerning architecture. Students are expected to develop a critical understanding of the relationship between design and the fulfillment of human needs and aspirations. To broaden their knowledge and understanding of human behavior and the environment, students have the opportunity to study in joint studios offered in landscape architecture and urban design and to take courses in the other Departments and programs within PennDesign and the other schools within the University.

3.2 Program Self-Assessment Procedures

The program undertakes self-assessment in several mutually-reinforcing ways.

In addition to evaluating their courses, students express concerns and suggestions for curriculum improvements directly to their instructors, in meetings with the Chair and on committees of the Department and the School. Some of the senior faculty provide regular leadership for specific streams of the curriculum, history-theory, design, and technology in particular. Likewise the Chair reviews courses, course evaluations, and curriculum development on a regular basis. As part of the faculty searches in AY 08-09, a broad curricular review was initiated by the Interim Chair, which both assisted in the selection of faculty candidates, and identified a number of curricular topics demanding further faculty discussion. In particular, the content and sequencing of three principle fields—history-theory, technology, and visualization and design techniques—will be referred to faculty committees in the Fall of 2009. Meetings of the Standing Faculty review all aspects of the program and vote to approve any changes to the curriculum, forwarding decisions to the Curriculum Committee of the School for final approval.

The Dean also provides leadership in the development of strategic plans. The most recent versions of the strategic plans of the School and Department was developed as part of an External Review in Spring, 2008, which was conducted in parallel with the search for new Dean, who assumed her duties in October, 2008. Those strategic plans are excerpted in Section 1.2 and 1.4. In addition, the Interim Chair has produced an annual agenda, distributed during the summer outlining his assessment of the Departments needs for the year.

In 2006, the Department began contacting recent graduates to determine where they were working, and to solicit anecdotal information about their experiences. In the summer of 2009, the Department began conducting more systematic surveys of its alumni and current students, using on-line survey software and more standardized questions. The

results of these first are still being analyzed, but will be used to determine how many graduates are getting licensed, where they are working, and to solicit their assessment of their Penn education.

Alumni Survey. We contacted the 3000 graduates going back to 1950 for whom we have working emails and received over 500 responses, of which 322 were from MArch graduates. Of those MARCH alumni, 70% reported that they were currently working as an architect. Over 71% reported that they were licensed, and of the remaining unlicensed, 63% intend to get licensed. 91% were working in the US, with 46% working in the Northeast and 21.2% in the Mid-Atlantic. 35% were working in firms of 4 or less, and the rest in larger firms, with 27% in firms larger than 100. Over 70% rated their Penn education at 4 or 5 out of a scale of 5. The main "challenges" to the Penn program that they cited were cost and preparation for professional practice. The main challenges they cited to the profession generally were the role of the architect and business models, and sustainable design.

3.3 Public Information

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

The following is a description of the Masters of Architecture degree program as it appears in University of Pennsylvania catalogs, web site, and other institutionally authorized material.

Architecture

Focused on the design and fabrication of buildings, architecture embraces every scale of artifact and mode of material organization -- from the spoon to the city, from objects to environments, from the tangible to the ephemeral. Architectural education provides a framework for participating in the world around us as an on-going and evolving process of creation – a complex process that is at once social and natural, stabilizing and changing, constraining and enabling. Architecture at Penn seeks to pilot that process so that architects may better serve society, enhance life and enrich experience. Through research, critical inquiry and experimentation we conceptualize potentials latent within the multiple systems of production that generate the spaces and structures in which people live.

Architecture finds itself today in a world that resists easy characterization. It has been called the age of globalization, information, and biotechnics; post-industrial, post-metropolitan, and post-human; a network economy, a control society, an ecological crisis. It is an age that produces theories of complexity, which are, in fact, urgently needed. Transformations of the economic-technological-social matrix over the past thirty years have affected every aspect of architecture, its place in the world, potential contribution to culture, and status as a discipline and an art.

As the modulation of life practices, interactions, rhythms, and experiences becomes the focus of economic investment, cultural interpretation, and political contestation, architecture's expertise is being reconfigured within an interwoven field of material practices, including engineering, industrial design, graphic design, new media, furniture, fashion, art and entertainment, but also ecology, urban planning, and business management. The more diverse architectural practices become, the more evident it is that the skills and modes of thinking developed through architectural education — analytic, creative, synthetic, and applied — are polymorphous and adaptable to a wide range of challenges and opportunities. Graduates today pursue diverse and hybrid careers not only in architecture but in many spheres of creativity activity.

From its founding in 1890, architecture at Penn has emphasized the link between theoretical speculation, professional practice, and artistic expression. Our faculty are distinguished precisely by bringing these trajectories together, engendering new ways of seeing, new trajectories for imagination, and new models of practice. Since the time of Louis Kahn and Robert le Ricolais, the program has maintained a focus on architecture's relationship with technology, understood in the broadest sense as technologies of construction, representation and organization. Today, the implications and potentials of digital technologies are pursued in every aspect of study as they are in every aspect of the building industry and professional practice.

Master of Architecture Professional Degree Program

The Master of Architecture is a comprehensive and rigorous program, preparing graduates for the full range of activities in the profession. It provides a thorough base of knowledge in history, theory, technology, ecology, society, and professional practice, while developing skills in design through an intensive sequence of design studios. Studios are the focus of the program and are supported by courses in visual studies that develop skills first in traditional modes of drawing and conceptualization, then in digital and new media. At the upper levels of the program students establish individual trajectories by selecting from a range of elective studios and courses with leading figures in design, technology and theory. The final year culminates in advanced design studios that include research directed by leading designers as well as the option of an independent thesis. Summer programs abroad and studios based in other countries provide opportunities for international studies. The program aims to develop critical, creative and independent thinking that realizes potentials within an ever-changing world.

A total of 28 course units are required for the Master of Architecture Professional degree. Students are permitted to take an additional 2 course units in optional electives for a maximum total of 30 course units. To attain the degree, a student must complete the following required courses: 10 course units in design studio, 5.5 in technology, 3 in history and theory, 1.5 in visual studies, and 2 in professional practice. In addition to required courses, students must take 4 electives. A research studio or independent thesis (2 course units) is required in the final semester. The program offers several study abroad options each year.

Students entering the Professional Degree Program with an undergraduate degree in a subject other than architecture undertake a three-year course of study comprising 28 course units. (Typical courses are 1 course unit, studios are 2 course units.) Students with a four-year undergraduate degree in architecture may receive Advanced Standing of up to one year

Although part-time study is allowed, students are required to complete a minimum of two semesters of full-time studies in residence. To be a full-time student requires a minimum of three course units per semester. To complete the degree requirements, those students who elect to take less than five course units per semester may enroll in one of the Summer Programs or return in the following academic year on a full-time or part-time basis. The Master of Architecture Program may be combined with certificate programs in Historic Preservation, Urban Design, or Real Estate Design and Development.

Admission Requirements

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

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

courses to meet conditions of admission. A program of study is offered in the summers specifically for this.

Non-Discrimination Policy Statement:

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University does not discriminate on the basis of race, color, sex, sexual orientation, religion, national or ethnic origin, age disability or status as a disabled Vietnam era veteran in the administration of its educational policies, programs, or activities, admissions policies, and procedures, scholarship and loan programs, employment, recreational, athletic, or other University administered programs.

Notice to Prospective Students of Availability of Crime Information:

The federal Crime Awareness and Campus Security Act requires all institutions of higher education to provide information on their security policies and procedures and specific statistic for criminal incidents and arrests on campus to students and employees, and to make the information and statistics available to prospective students and employees upon request. The Pennsylvania College and University Security Information Act requires Penn to provide information about its security policies and procedures to students, employees and applicants; to provide crime statistics to students and employees upon request. The information about Penn is available by calling the Division of Public Safety.

The University's Affirmative Action Policy states that the University seeks to eliminate patterns of unequal treatment through its recruitment methods, administrative reviews and hiring practices, affirmative action analyses of faculty, staff and student units and responses to the finding of these reviews, and professional development training. The University also publishes Racial and Sexual Harassment Policies, Guidelines for Addressing Academic Issues of Students with Disabilities, and a policy on Secular and Religious Holidays. Complete guidelines for the above policies are included in the *University Policies and Procedures* handbook. Each year, students, faculty and staff members are given a copy of this handbook.

The following notice about accreditation is included in the School of Design web site and linked from the program description on the Department of Architecture web site.

"Master of Architecture Accreditation
"In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards. Masters degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

"The Master of Architecture Professional Degree Program is fully accredited by the NAAB."

The Student Handbook of the School of Design, which is distributed to faculty and students each year, also includes a basic statement about NAAB accreditation.

"The M.Arch is a professional degree accredited by the National Architectural Accrediting Board (NAAB)."

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 Web site.

As part of the preparation of the self-evaluation, the NAAB Student Performance Criteria were distributed to the faculty. The Department and School website features a link to the NAAB website to encourage applicants, students, and faculty to be familiar with these criteria. The Student Handbook also includes a basic statement about NAAB accreditation.

3.4 Social Equity

3.4.1 Provide the criteria and procedures used to achieve equity and diversity in faculty appointments, reappointments, compensation, and promotions

In accordance with the University of Pennsylvania's Non-Discriminatory Policy, the Department of Architecture is committed to hiring talented faculty from diverse backgrounds. The dean will appoint a member of the standing faculty to serve as the school's affirmative action officer each year. Before appointments are proposed to the dean, the affirmative action officer must be satisfied that searches or other processes have been conducted in a way that identified, interviewed and gave full consideration to the most qualified women and members of underrepresented minority groups. The affirmative action officer also advises search committees on strategies that are likely to be effective in building a diverse faculty.

Every effort is made to recruit women and minorities during each search process. Since the last accreditation visit, the Department has hired five new assistant professors, of which three are women (though one has subsequently moved to another school).

The Department endeavors to enhance faculty development and assist the promotion process through a variety of mechanisms including leaves of absence, symposia, support for travel to attend and present scholarly papers at national and international conferences and the mentoring of junior faculty. Such support is provided on an equitable basis to all faculty. Professor Marion Weiss was recently promoted to Full Professor. Assistant Professors Cathrine Veikos and Helene Furjan were both reappointed for the conclusion of their tenure probationary appointments.

3.4.2 Provide the criteria and procedures used to achieve equity and diversity in student admissions, advancement, retention, and graduation

The Department of Architecture is committed to matriculating and retaining representatives from all segments of society in order to build a diverse student population. In order to ensure this, the School, through its admissions and financial aid policies, has a "needs blind" admissions process. All accepted applicants demonstrating financial need (contingent upon the submission of required documentation) are guaranteed to receive a financial award from the school, the amount of which is determined relative to their overall need figure. The Department specifically targets merit awards to encourage the matriculation of qualified minority candidates such as a $12,000 Dean's Scholarship offered to an underrepresented minority student each year. Additionally, since the last accreditation visit, the Department now offers three diversity scholarships each year for candidates from underrepresented minorities that provide full tuition for the duration of the student's education.

For the last three years, the Black Student Alliance has worked with the Department and the Admissions office to organize events to attract more talented applicants from underrepresented minorities. They have developed a Fall event, tied to our Open House, call Demystifying Penn, that hosts applicants for a weekend and introduces them to program administrators and faculty. In the spring, they have organized a thematic, high-profile conference on Graduate Education to help attract minority faculty and prospective students. Additionally, we participate in programs that assist underrepresented and disadvantaged students, such as the McNair Scholars Program and Project 1000 whereby we waive the application fees for these applicants.

Lastly, we send targeted mailings to prospective applicants from the National Name Exchange and the GRE Search Service. The Dean also sends information to HBCUs, Hispanic Serving Institutions and Tribal Colleges

3.4.3 Provide a description of the means by which faculty, students, and staff are given access to the formulation of policies and procedures, including curriculum review and program development

There are several mechanisms available for faculty, students and staff to contribute to the Program's formulation of policies and procedures. Department faculty meetings are held once a month during the academic year. These two-hour meetings have a two-part format. The first hour is open to all members of the department's teaching faculty – Standing, Adjunct, Practice and Lecturers – for the purpose of discussion on issues related to the curriculum. The second hour concerns appointments and promotions and is therefore appropriate to Standing Faculty only. The Curriculum, Events, Thesis, and Awards Committee are comprised of faculty members and students.

These committees make recommendations to the Chair. The Chair also assists students who take initiatives with respect to curricular development and special events on a case-by-case basis. Students are appointed to serve on faculty search committees for the Department.

The Architecture Department has a student representative on the Student Council for the School. In turn, there is a studio representative that organizes the election of studio representatives from each design studio, Fall and Spring. The Chair meets with the student representatives on a regular basis and holds periodic student forums to canvas views on a wide range of departmental matters.

The Dean of the School of Design heads the monthly school-wide faculty meetings. Members of the Architecture faculty also serve on the School's various committees, including Admissions, Curriculum, and Personnel Committees. The Chair of the Department and Directors of the BA and PhD programs in Architecture all sit on the School's Executive Committee and participate actively in the formulation of policies and procedures for the benefit of the Department and the School.

3.5 Studio Culture

Over the summer, the Faculty adopted a draft studio culture policy that affirms the basic principles outlined by the original AIAS report and implicitly endorsed by NAAB requirement 3.5. However the subsequent AIAS report issued in 2008 concluded that the process of discussing studio culture and resolving issues was perhaps more important than formal policy statements. In that spirit, the initial policy statement was made intentionally broad, and a more specific discussion with the faculty and design studio representatives will be initiated during the Fall of 2009.

In particular, the studio representative structure has been one of the primary regulators of the studio culture at Penn. In recent years, meetings of the studio representatives have regularly addressed both everyday housekeeping issues and deeper questions about equity, overwork, and health.

Studio Practices and Policies

In Fall 2009, studio representatives and faculty will be asked to identify the practices that already regulate the studio culture at Penn, and to outline those in a manual of studio practices. These should include implicit and explicit practices, and include pedagogical practices such as the arrangements for desk-crits, pin-ups, and formal reviews, as well as housekeeping practices like those concerning noise, cleanliness and the sharing of common resources such as plotters and laser cutters.

The faculty and studio representatives will be asked to identify problems with the current studio practices and to propose changes or new practices that should be instituted and included in the manual of studio practices.

Finally, the faculty will be asked to review the manual of studio practices and to revise the studio culture policy as needed.

3.6 Human Resources

3.6.1. Describe the students' educational backgrounds and the degree program's selectivity, retention, and time-to-graduation rates since the last accreditation sequence

Students in the program come from all parts of the country and the world with undergraduate majors in the sciences and humanities. The student body male-to-female ratio is approximately 47% female, 53% male; 33% of the students in the program are international, and 13% are considered minority students. There has been a steady increase applications generally since the last accreditation visit, with a roughly 20% increase from 2003 to 2008. Among applicants, 53% were male, 38% were non-US citizens, and 6% were underrepresented minorities.

The admissions process is rigorous and the program is selective. The Admissions Committee consists of faculty who carefully screen all applications. For AY 2008-09, our acceptance rate for applicants into the 3 year program was 36%, and 24% with advanced standing. Our conversion rate on those accepted was 39% in the 3 year program, and 26% with advanced standing. The lower rate in the two-year program is largely because of the difficulty of keeping Penn undergraduates at Penn for graduate school.

Since 2004, we have formalized a program of advanced standing/sub-matriculation for a select group of 4-12 Penn undergraduate majors in Architecture. Students apply in their junior year and

are admitted based on grades, the review of the undergraduate studio faculty, and the Chair of the Department and Undergraduate program. The program is called the Intensive Major, and students take a special section of the 4th year undergraduate studios and theory course and take the required first year technology courses in the graduate program.

The retention rate of students in the program since the last accreditation is over 95%. We typically have 1 to 6 withdrawals each year. The professional degree program is a three-year program and most students complete the program in this time. A similarly small percentage of students, 1 to 4 per year, are granted leaves of absence due to illness, financial, or personal reasons. Of those students on leave, most return to complete their degree requirements.

3.6.2. Provide description of the 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

The faculty maintains a balance between scholarship and practice. Many of the faculty practice architecture and many are engaged in scholarship. The Department has a tradition of engaging prominent practitioners to teach in the elective studios. A number of national and international architects teach elective studios each year offering a variety of studio topics and design approaches.

A full-time teaching load typically consists of four courses units per year, one design studio and two courses, or two design studios and one course. This ensures that faculty members have sufficient time to pursue their research or creative professional practice, as applicable. The Chair and Associate Chair and other faculty members performing administrative roles may receive relief from teaching, and may receive an additional financial stipend. In addition, faculty in their tenure-probationary period are typically given one semester leave in the time between their reappointment and tenure reviews.

Until AY 2009-10, students evaluate faculty using physical course evaluation forms, which were distributed to each student in all courses and studios at the end of each semester. Beginning this year, those evaluations will be on-line and students must complete them or waive their completion, before receiving their final grades. In both cases, Students evaluate the instructor and the course on a scale of 1 to 4, with 1 being the lowest rating, and are asked to include additional comments if desired. Course evaluations are monitored by the Chair in order to maintain course quality. Students are asked to complete an evaluation form for every class and studio in which they were enrolled during the semester. The data is permanently recorded and housed by the Office of Institutional Research. Instructors are given copies of the results, including the anonymous comments sections. The results are considered by the Dean and the department when a faculty member is considered for re-appointment, promotion and/or tenure. A sample form is included in Section 4.1.

3.6.3. Provide faculty-student teacher ratios for studios for all design levels

Summer 2008
ARCH 500 – 10:1
ARCH 782 – 9:1

Fall 2008
ARCH 501: 13:1
ARCH 601: 12:1
ARCH 701: 13:1
ARCH 703: 13:1

Spring 2009
ARCH 502 – 12:1
ARCH 602 – 12:1
ARCH 704 – 12:1

3.6.4. For each administrative position, provide a description of the distribution of effort between administrative and other responsibilities

Department Chair:

The Chair has two primary areas of responsibility: the development of a collegial environment within which individual members of the faculty can contribute to the educational mission of the Department while being encouraged in their teaching and personal development; and the reporting and championing of the needs of the Department to the Dean. The Chair is responsible for securing and maintaining faculty and administrative staff, for ensuring the appropriateness of courses and the adequacy of programs, and for promoting scholarly and research activities. Other administrative responsibilities of the Chair relate to the daily functioning of the Department and its administrative staff.

It is the responsibility of the Chair to execute within the department the policies of the University concerning teaching and research, fiscal affairs, and other administrative business. The Chair is responsible, after conferring with faculty and students, for ensuring the appropriateness of the courses and adequacy of the program offered by the department in accord with educational policies established by the faculties concerned. The Chair is responsible to have the courses staffed so as best to promote teaching that is effective and stimulating in content and in presentation. The Chair is the department's executive officer. In aid of the development and maintenance within the department of collegial respect for the educational enterprise, the Chair is responsible not only to the dean but also to the department as a collectivity for the conduct of its affairs.

The Chair currently teaches a required lecture course (ARCH 534) and an advanced seminar (ARCH 713) required for the certificate in Ecological Architecture, along with carrying out the duties of the Chair.

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

- Associate Chair, Student Affairs *[not filled this year with duties assumed by the Chair]*
- Director of the Graduate Group in Architecture [Ph.D & M.S.]
- Director of the Undergraduate Program [B.A. with a Major in Architecture]
- Director of the Post-Professional Program
- Academic Advisors for each level of the Professional Degree Program
- Semester Studio Coordinators who teach and assist in the administration of first three semesters
- Thesis Coordinator to oversee Thesis Preparation and Thesis
- Coordinators for the summer abroad programs
- Standing committees on admissions, curriculum, lecture series, technology

3.6.5. For each staff position, a description of the distribution of effort between administration and other responsibilities

The Department's administrative staff includes a Department Coordinator, a Financial Administrator, two Administrative Assistants, and part-time work-study students.

Department Coordinator:

The Department Coordinator assists the Chair of the Department of Architecture in all administrative matters. His/Her duties include: supervising the Administrative Staff; liaison with the Dean's Office [Associate Dean for Administration, Assistant Dean for Operations and Planning, Director of Development, Director of Admissions and Financial Aid, Finance Manager]; statistics & reports [enrollment, FTE, budget, accreditation, annual reports]; faculty meeting minutes for the; faculty appointments & promotions; liaison with external organizations [ACSA, NAAB, NCARB, AIA]; liaison with English Language Programs; liaison with Career Development; liason with Office of International Programs [OIP]; assists faculty and students with visa issues; and works on special administrative assignments. The Dept Coordinator also maintains Departmental calendar, orientation schedule, project and task list, and schedules and runs staff meetings.

Administrative Assistant: Financial

The Financial Administrative Assistant deals with financial issues for Ph.D., M.S., M Arch, and B.A. faculty, students and staff, including the financial accounting for payroll, work-study students, course budgets, current expenses, competitions and awards; executes purchase orders for office supplies and equipment, and makes all travel and hotel arrangements. She prepares Payroll Action Forms, maintains Current Expense spreadsheet; maintains Designated Fund accounts [fellowships & awards] while also assisting the Chair and the Assistant to the Chair in the development of an Operating Fund budget, Travel/accommodation/honoraria/expenses in conjunction with lecture series, searches, competitions, conferences, awards, thesis, course budgets, and summer abroad programs

Administrative Assistant: Student Records, MArch, MS & PhD

The Administrative Assistant maintains student records for the Masters of Architecture, MS, and PhD and deals with most academic issues related to DOA and Ph.D. She is also a liaison with Registrar; maintains Course Roster, Room Roster, Register; advanced registration; Elective Course Presentation; Elective Studio Presentation; room & studio

assignments; student appointments with the Chair DOA, Chair Ph.D.; maintains student records; collects Grade forms; assists with Graduation; maintains Academic Calendar;

The Administrative Assistant shares reception, office, and phone answering duties with the other administrative assistant (Communications); greets visitors; answers questions; receives and directs incoming telephone calls; takes messages for faculty; maintains directories of faculty, students, and staff; maintains photocopy machine; maintains mailboxes for faculty and students; sorts and distributes incoming mail; distributes outgoing mail to faculty, students & staff; maintains fax machine; distributes incoming faxes; maintains appointment calendars for Academic Advisors;

Administrative Assistant: Communications

The Administrative Assistant for Communications maintains student records for Undergraduate programs in Architecture, assists the Chair of the Undergraduate Program, and deals with most academic issues related to the Undergraduate program. He/she is also responsible for all issues of external communication including telephone, mail, e-mail listservs, and web site while maintaining the building's bulletin boards for academic posters and job descriptions. He/she manages the collection of student work for use in publications, and the design and production of annual WORK publication. While assisting the departmental lecture committee with correspondence, budgeting, organization, and production and distribution of promotional materials, he/she also assists with the department's open house.

This individual shares reception and office duties with the other administrative assistant; greets visitors; answers questions; receives and directs incoming telephone calls; takes messages for faculty; maintains directories of faculty, students, and staff; maintains photocopy machine; maintains mailboxes for faculty and students; sorts and distributes incoming mail; distributes outgoing mail to faculty, students & staff; maintains fax machine; distributes incoming faxes; maintains appointment calendars for Academic Advisors;

Approximately 2-4 work-study students are employed by the Department each semester to assist the administrative staff. Work-study duties include word-processing, filing, photocopying, and assisting with special projects.

3.6.6. Identification of any significant problem, with recommendations for improvement.

The numbers of students have grown in the last five years, as have the numbers of programs offered and provisions for travelling. Any further increases will require some additional staff support.

3.7 Human Resource Development

3.7.1 Provide the school's policy regarding human resource development opportunities

As part of the School of Design and the University of Pennsylvania, the program provides development opportunities for faculty, staff and students. Faculty members are eligible for paid sabbatical leaves (one semester every six years at full salary) and unpaid leaves in order to focus on their research, scholarship or creative practice. Faculty members on tenure-track are offered a paid leave for one semester prior to their tenure review. Travel expenses to participate in conferences are supported by a Faculty Development provided by the School. Substantial grants from the University are awarded on a competitive basis. Faculty and students both benefit from the events program sponsored by the Department, which exposes them to leading figures and distinguished work in the field. Administrative staff are eligible for development opportunities through the University, including development seminars and workshops. More information on staff development opportunities can be found at http://www.hr.upenn.edu/Learning/. Development for students is the central mission of the academic program, while, more specifically, career development workshops and lectures are offered by Career Services with the close cooperation of the Chair of the Department.

3.7.2 Provide a list of visiting lecturers and critics brought to the school since the previous site visit

The list of guest lectures is included in Appendix 4

3.7.3 A list of public exhibitions brought to the school since the previous site visit

The list of guest exhibitions is included in Appendix 4

3.7.4 Provide a description of student support services, including academic and personal advising,

career guidance, and internship placement where applicable

Advising and Career Guidance

A member of the Standing or full-time Faculty is assigned as an advisor to each student in the program, with each faculty member having 10 to 20 advisees each year. Dual-degree students, or students with special issues, are advised by the Chair. The advisor give advice on course and studio selection, and provide support on personal or career matters, referring students to University offices as needed. The office of Counseling And Psychological Services (CAPS) has at least two counselors who track our students and pay attention to the issues particular to students in professional programs. Students can visit CAPS on a walk-in basis, or by appointment. The University's Careers Services Office is also available for personal career advice and job placement before or after graduation. Career Services organizes an annual Career Day, and a number of other special events for students, from portfolio reviews to sessions on alternate career paths. On career day, numerous employers make a visit to campus to provide information to students as prospective employees. A master "Resume Book" is also published by the Office of Career services. It is kept on file and given to prospective employers who contact that office in search of employees. Anecdotally, however, many graduates make their initial entry into the professional world based upon the informal advising and networking that takes place during their years at Penn, often working for Penn faculty in their practices.

Scholarships

The program has a number of endowments for scholarships, which are awarded on the basis of merit during the admission process. Another group of scholarships and travelling fellowships are awarded through design competitions held during the first week of the Spring Semester. The Department considers competitions to be an important part of an architectural education and runs three competitions each January. Participation is mandatory and the competitions are designed specific to each level of the program. In addition to the monetary awards at stake, the competitions are of value to students in other ways. The work produced is documented and included in their professional design portfolios and often used when seeking summer internships. Competition winners receive a notation on the official University transcript and are included in annual University commencement materials and publications. First, second, and third prizes, as well as honorable mentions are awarded for the Schenck-Woodman Scholarship (500-level). The 600-level students enter the Dales Portfolio Competition. Monetary prizes are awarded to the top 25% to 30% of those entering (approx. twenty-five students). While the amount varies from year to year, it is generally enough to fund a trip abroad. In addition to the obvious benefits of a traveling scholarship, this competition is also useful in the development of the portfolio. 700 level students participate in the state-wide Stewardson competition, with a modest scholarship provided in-house to recognize the best entries.

Internships
One summer internship is currently offered by outside organizations and administered by the Department:

Takenaka Internship
Takenaka Komuten is one of "the big five" general contractors in Japan with offices all over the world including Europe and America. One summer internship is awarded yearly at the main Takenaka Office in Osaka, Japan. To be eligible, students must have at least one full semester remaining after the summer and must be in the first professional degree program. To be considered for the internship, students must submit a portfolio of design work and be in good academic standing. Interns at Takenaka are required to train within many different areas of the office, including design, engineering and construction. Interns are able to work within any area, and possibly on any project. Usually, 10 days are reserved for working on a large construction site. Beginning pay for an intern is approximately 1,500 dollars per month and Takenaka considerably reduces most living expenses. Five workdays per week and every other Saturday morning are required. The internship takes place over a three-month period from June to August.

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

Students participate in field trips, on-site visits, and visits to professional practices as a requirement of many course and studios and as part of the

Professional Practice sequence. In addition, the program offers several study abroad programs each summer. Upper-level elective coursework taken during the summer provides elective credit normally scheduled during the fall or spring semesters. The program awards scholarship assistance designed specifically to enable a significant number of students to participate in international programs. Each student enrolled in a summer study abroad program receives a traveling stipend to help defray the costs incurred.

A semester-long program of study in London, in affiliation with the Architectural Association's School, was established in 2000. Each Fall semester, fifteen students in the 700-level are chosen via lottery to participate in this program. These students receive monetary awards from endowed funds to help facilitate their trip.

When possible, the department provides supports for transportation to site visits associated with class lectures and curriculum. Visits to construction sites, manufacturing facilities, foundries and other points of interest are led by faculty members.

It is also now common for upper level design studios to travel to locations abroad, including Europe, Asia and Central America. Faculty have been able to secure funding or support-in-kind in order to sponsor student travel in conjunction with these studios. The Department provides some funds for this through endowed travel fellowships, and the Dean provides additional funds to support international travel.

Other kinds of off-site opportunities are supported by gifts or by faculty projects run through Penn Praxis. For example The "Trilogy on Aging" project run by Matthias Hollwich and William Braham, supported travel in a 700 level seminar in Spring 2009, summer research for students, travel for an arch 701 studio in Fall 2009, to be followed by a spring symposium.

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

The University of Pennsylvania includes a host of student societies and service organizations, as well as sports and recreational groups. The Graduate and Professional Student Assembly mounts many social events, sponsors student-run events, and operates the Graduate Student Center which includes a student lounge. There are also many groups that are involved in community services. For further information on university-wide student organizations, please see www.gapsa.upenn.edu, www.upenn.edu/campus, and www.upenn.edu/campus/community_services.php.

Within the School of Design, the Real Estate Club provides opportunity for students to post their resume on-line in the Zell Lurie resume book; partnership with a mentor for one-on-one guidance throughout the year; making site visits to tour and learn about development projects; participation in the Zell Lurie career fair and fall/spring events.

3.7.7 Provide a description of the policies, procedures, and criteria for faculty appointment, promotion, and tenure and access to faculty development opportunities

The faculty is composed of Standing and Adjunct Faculty from the Philadelphia and New York City regional area. The faculty also includes a number of Practice Professors, who are distinguished architects from all over the world. Many of these faculty are practicing architects. Lecturers from the same regional area and around the world contribute additional expertise to the program.

The University regulates the number of tenured faculty positions for each school and department. Only full-time faculty are appointed to tenure-track positions following a search procedure regulated by the University, and outlined in the Faculty Handbook of the University and the Personnel Manual of the School of Design. All appointments, reappointments and tenure decisions follow specific review procedures through the Standing Faculty of a department, the school's Personnel Committee and the University's Provost Staff Conference. Standing Faculty are usually given an initial four-plus-three year probationary appointment as an Assistant Professor, with a reappointment review in their third year. They are reviewed for tenure no later than the sixth year of the term.

Adjunct faculty are appointed for three to five years and are limited to half time teaching roles by the University. These appointments must follow similar procedures to that of full-time faculty for reappointment and promotion. Practice Professors are appointed for three to five year terms, which are

renewable, and may teach part- or full-time. After consulting with appropriate members of the faculty, the Chair recommends the appointment of Lecturers and Assistant Instructors on an annual basis.

3.7.8 Provide evidence of the school's facilitation of faculty research, scholarship, and creative activities since the previous site visit, including the granting of sabbatical leaves and unpaid leaves of absence, opportunities for the acquisition of new skills and knowledge, and support of attendance at professional meetings

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

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

3.7.9 Provide evidence of how faculty members remain current in their knowledge of the changing demands of practice and licensure.

Many of the faculty are licensed members of the AIA and remain current in their knowledge of practice and licensure through practice and participation in professional organizations and events. The program recognizes the importance of attending professional as well as academic conferences for professional development. To facilitate this, the School gives funding to members of the Standing Faculty for travel costs and conference fees.

3.8 Physical Resources

Plans of the school are provided in Appendix 3

3.8.1 Physical Plan Description

The Department of Architecture is located in Meyerson Hall. Some of its offices and support facilities are housed in the Duhring Wing of the Fischer Fine Arts building. On the first floor of Meyerson the School of Design's administrative offices—the Dean and her staff, the Registrar and Finance Office, and the Admissions and Financial Aid administrative offices--are located adjacent to the school's central gallery and exhibition spaces. The Architecture Department office is located on the second floor in close proximity to the 500 level and 600 level studio spaces. The basement and ground floor levels contain seminar rooms, lecture halls, and faculty and building staff offices. Studios spaces are located throughout the 2nd and 3rd levels, and in rooms on the ground and 4th floor levels. The School of Design's computing lab and support staff offices are located on the 3rd level. The School of Design's fabrication shop is located on the fourth floor, east wing.

Access to the Lower (main) exhibition area is through the front doors on the south side of Meyerson Hall. Access to elevators, and subsequently, to all parts of the building is via the loading dock doors on the northeast corner of the building. In 2004, the Meyerson hall lobby, galleries, administrative offices, 1st level corridors and the Architecture office suite were renovated with new finishes and lighting.

3.8.2 Studios and Review Spaces

Required first and second year architecture studios fill the east and west wings of the 2nd floor level. Each wing accommodates about 70 students. Elective studios and thesis students occupy half of the 3rd level balconies (32 students each). The studios on the 3rd level balcony have been renovated over the last two summers to provide a more flexible format with rolling desks, wi-fi access, and a somewhat higher density (48 instead of 35 students on each side). There are other studios in Meyerson and Fischer Fine Arts occasionally used for architecture studios, but now mostly dedicated to studios in other departments.

All studios in Meyerson provide individual workstations. On the second floor each station has an L-shaped desk and back-up table (measuring

approximately 6' x 5.5'), a drafting chair, a drawing lamp, and a lockable cabinet. On the third floor each station is mobile desk 3'x 6', with a built in under-desk shelving and a mobile, lockable storage unit. Workstations are each provided with one computer networking outlet and access to electric power. Open shelves and collective flat files are also provided for storage. The current plan is to also convert the second floor studios to a mobile desk configuration, increasing the flexibility of studio assignment and the number of stations.

Formal mid- and final-project reviews are mounted in the three primary gallery spaces shared by the School of Design's four departments for exhibitions and reviews on the first floor: the Upper and Lower Galleries and "Dean's Alley." Informal, small-scale reviews or work pin-ups, are held in various spaces throughout Meyerson Hall—the large galleries (if available), the fourth floor critique space, and the second- and third-floor corridors, which are furnished with removable panels. When available, additional review space can be reserved at Morgan Hall across 33rd street or at Addams Hall at 36th and Walnut.

3.8.3 Classrooms, Shops, Labs, etc.

There are five lecture halls (B-1, B-2, B-3, B-4, and B-13) in the basement of Meyerson Hall with capacities varying from 45-430 seats. There are three seminar rooms (B-5, B-6, B-7) in the basement. In 2007, all of the B-classrooms were upgraded to tech classrooms equipped with hi-res audio/visual equipment. B-4 & B-13 are additionally equipped with workstation tables for personal laptop hook-up. Three additional seminar rooms are available in the Fischer Fine Arts Library. All of these lecture halls and seminar spaces are open to the university pool and are used for other university classes, though the departments of the School of Design have priority in room assignment. Also located in the basement are shared storage rooms for models. The Department also provide lights and different types of backgrounds for model photography on a loaning basis.

The School of Design's computing facilities (see www.design.upenn.edu/comp) has one dedicated instructional lab with 24 high-end workstations (PC and Mac) running various 3D modeling and simulation software (Maya, 3DStudio Max, Fluent, FloLab, etc.) as well as several Autodesk, Adobe, Macromedia, and other CAD/Design-oriented titles. The majority of this software is available free-of-charge for installation to student-owned computers attached to the school-network, saving them thousands of dollars on software purchases. The University also furnishes discounted software packages for the student's individual purchase. In addition, the TC Chan Center has workstations used for simulation and and flow control research projects and the Digital Video Lab has 8 workstations used occasionally by architecture students to create video production of their projects. Four new large-format plotters and a color laser printer provide reasonably priced output, crucial to the demanding load during review periods. The computing facility is staffed by three full-time specialists and one work-study student. During peak review times, the computing staff provides access to a render-farm facility, where students can send complex rendering tasks, so they can continue working on their design projects.

Specific advances prompted primarily by faculty have also increased the types of use of digital media within the department. By securing major university grants, new CNC milling and laser cutting equipment were added to the department's fabrication facilities. These CAD-CAM based technologies are used to explore the potential of digital media for the built as well as graphic dimension of architecture. The four laser-cutters are now used extensively throughout the department, particularly for model-building; the CNC milling equipment is used in specific courses.

The School of Design's Fabrication Laboratory (www.design.upenn.edu/fabrication), which includes facilities for wood, metal and digital fabrication is currently housed on 4th level of Meyerson Hall. One large workshop space (Rm. 409) and an ancillary room for the laser cutter (50-watt) provide 3000 square feet of laboratory space. There is an additional room (Rm. 408) which houses a paint spray booth and is used by students to assemble and store large projects. The main laboratory space houses the following pieces of equipment: (1) 10" table saw, (1) 8" jointer, (3) 14" wood band saws, (1) 12" disk and 6" x 48" belt sander, (1) 12" compound sliding miter saw, (1) 12" miter saw, (1) 12" ferrous chop saw, (1) 24" Dia-acro brake fold, (1) 14" non-ferrous cutting band saw, (1) 26" ferrous band saw, (1) drill press, (1) Hegner scroll saw, (1) sandblaster, (2) bridgeboard vertical milling machines, (1) Southbend engine lather, and (1) Sheldon engine lather, and (1) large format Techno-Iseo CNC (Computer Numeric Control) router. There is also a large assortment of

hand and hand-powered tools for use by students in the shop. The lab is open to all students pursuant to completion of a risk management department-mandated safety course. There are two full-time staff members to assist students during normal hours (Mon-Thurs 8am-7pm/ Fridays 8am-4pm/ Saturdays and Sundays from 11am-6pm). During peak times, there are three staff members on duty. Students who have demonstrated competency are allowed after-hours access to certain tools.

3.8.4 Offices

The Department's administrative offices are located on the 2nd floor of Meyerson Hall. Additional offices for standing faculty, visiting critics and lecturers are located in Meyerson Hall, and the upper floors and Duhring Wing of the Fisher Fine Arts Library.

3.9 Information Resources

Context and Institutional Relationships.

At Penn, the architecture collection is housed in the Anne and Jerome Fisher Fine Arts Library. Additional relevant material is located across the several units of the Penn Libraries, including Van Pelt-Dietrich Library, Engineering Library, and the Museum Library. These resources are available in their entirety to students in the School of Design's Master of Architecture Professional Degree Program. Services are centered at the Fine Arts Library as well; however, users from Architecture and across the University are increasingly dependent on Penn Libraries electronic resources accessed remotely – whether from on campus or anywhere in the world.

In the terminology of the NAAB, the Fine Arts Library is a branch library for the visual arts; it is located in a building designed by Frank Furness next to the Penn School of Design in Meyerson Hall. The Fisher Fine Arts Library building also provides space for the Penn-Tsinghua T.C. Chan Center for Building Simulation and Energy Studies (http://www.design.upenn.edu/bses/intro.swf), the Graduate Program in Historic Preservation, City and Regional Planning studios, as well as space for the PhD program in Architecture. The following description and assessment of the Fine Arts Library has been prepared by William B. Keller, Fine Arts Librarian. This section concludes with two Appendices that provide the required Library Statistics Reports.

The stated goals of PennDesign's Architecture Department include challenging architects to redefine and extend their work to better meet new issues – from climate change to globalization to digital design and fabrication. The multi-disciplinarity of the design enterprise (and how that project is carried out in the digital realm) encourages the Fine Arts Library to look anew at what we offer and how we operate.

3.9.1 Library and Information Resource Collections

1.) Goals and Issues

In contemplating the needs of new generations of art, architecture and design library users, we also think about more immediate issues -- the realities that we are dealing with now and can anticipate over the next few years. Our concerns include:

- Supporting the curriculum and research with digital and print

The general expansion of the digital realm has not been accompanied by a reduction in publishers' reliance on print books and periodicals. At the same time, book vendors (e.g., the European companies Casalini, Harrassowitz) are handling a gradually narrowing horizon of publications as course needs require more attention to global book (and, in fact, digital) production, where distribution patterns may be erratic. Our architectural rare book collection needs renewed presentation (including selective digital presentation), additional shelving space, and enhanced security.

Budgeting for Fine Arts Library collection development happens within the Humanities context. Yet the concerns of the School of Design, for example, range broadly and often emphasize context and interrelation with the social sciences. How can the Fine Arts Library more effectively support the curriculum's interdisciplinarity?

- Information services and staffing

Each of the three staff members who provide professional information services has substantial other responsibilities. Given current staffing levels, what options could be considered for strengthening the information services program? Circumstances are changing; staffing resources should perhaps be deployed differently.

- Fine Arts Image Collection

In-person use has declined while use of digital images (calling for reference assistance as well) has dramatically increased. Perspectives on metadata are changing. Use of valuable space needs to be determined. Promotion and delivery are key.

- Library as space

Study the reading room perimeter for additional opportunities to create value for the target audience. Develop options for providing Reserves services desk, periodicals reading space, and adequate work room.

- Planning and staffing

New conditions require new activities while some longstanding routines persist. Are there realistic opportunities to streamline or let go of processes while continuing to give attention to all important elements?

2.) Collection Description

Library Collections
Context

Housed in Van Pelt Library (the central social sciences, humanities and area studies library), in the school and departmental libraries, and distributed over the campus network, the print and digital collections support the research and instructional programs of the university, and represent the depth and range of scholarship at Penn. The Penn Libraries web content is based at http://www.library.upenn.edu/ and provides the most current information about our services and collections. These resources are available in their entirety to the faculty, students and staff of the Architecture Department of the Penn School of Design and the University. The Fine Arts Library's web portal (http://www.library.upenn.edu/finearts/) offers programmatic information about services and collections and direct links to text and image catalogs, databases and other resources needed by students and faculty.

The faculty and students of the Fisher Fine Arts Library's principal audience groups (School of Design, Department of the History of Art (in the School of Arts and Sciences)) look to us to provide the information resources and services necessary to their work. In addition, with Van Pelt Library and the University Museum Library, we support the interdisciplinary Graduate Group in the Art and Archaeology of the Mediterranean World. Other centers and programs across the university -- including Classical Studies, Annenberg School for Communication, English, History, Middle East Center, School of Engineering and Applied Science, and Urban Studies use and rely on the resources of the Fisher Fine Arts Library.

The Fine Arts Library supports the School of Design's Master's degree programs in Architecture, City and Regional Planning, Fine Arts (painting, sculpture, combined media, digital media, printmaking), Historic Preservation, Landscape Architecture, and Urban Spatial Analytics; the Ph.D. programs in Architecture and City and Regional Planning, as well as the Certificate programs in Urban Design, Real Estate Design and Development (in cooperation with the Wharton School), Historic Preservation, Landscape Studies, and City and Regional Planning.
Research groups created by the School of Design in recent years include the T.C. Chan Center for Building Simulation and Energy Studies, the Non-Linear Systems Organization (design of material structures), Penn Institute for Urban Research, and PennPraxis, a vehicle for carrying out applied projects for external clients under the direction of Penn Design faculty. These Centers and institutes are free to request resources and services from the Fine Arts Library.

The School of Design is characterized by certain core themes: design- and studio-centered education; an overall joining of theory and practice; designing urban and suburban environments; multidisciplinarity; and an international orientation. The Fine Arts Library uses these emphases as guiding factors in building and presenting information resources in support of the programs. Serving the Penn Design audience requires the library to support both the research and design processes. These require different sets of strategies. The research process may occur over a relatively lengthy period, requiring sustained use of an array of print and online resources. Such research work may take place within the library's physical space or wherever the user may be. The design process, which happens outside the physical library, is likely to move from inception to product along a rapid timeline, calling for more or less immediate access to needed information but shorter use of each

resource. Libraries (including the Fine Arts Library) have traditionally been better at delivering research support. That is why we have been looking at ways to adjust our services to better support the design community overall. For example, we have implemented a relatively short loan period for a kind of book previously considered part of the non-circulating reference collection. These titles, such as *Contractor's Guide to Green Building Construction* or *Graphic Designer's Color Handbook* often are used by designers to solve studio problems. The books circulate for use in the studio: the short-term loan recognizes their problem-solving utility and will make the book available to the next user more quickly. That is a start, but we will want to consider what we could do in areas such as supporting spatial analysis, providing in-person information consultation service outside the library (i.e., closer to where design work is happening), and digitally archiving graduate student studio work.

The Architecture Department and the Department of the History of Art may use the holdings of the Fine Arts Library Image Collection, including analog image resources and a developing body of digital resources, derived from local holdings and licensed from external sources. See http://dla.library.upenn.edu/dla/fisher/index.html and the entries in the Penn Libraries electronic resources directory, (http://www.library.upenn.edu/cgi-bin/res/sr.cgi).

a.) The collections of the Fine Arts Library (approximately 200,000 vols.) focus on the subjects of architecture, city planning, history of art, landscape architecture, historic preservation, urban design and fine arts (painting, printmaking, sculpture, combined media/newer technologies). Of this onsite volume total, about 90, 000 volumes are directly related to architectural history, theory and practice -- core areas of concern in the M. Arch program. The High Density Shelving Facility houses about 75,000 lower-use volumes in art and architecture. These titles are represented in the online catalog and are delivered to campus daily upon request.

The collection is continuing to expand beyond its original central European core to include the arts of Islam, South Asia and East Asia; these holdings supplement materials in the Van Pelt Library and the Museum Library. The Fine Arts Library houses the G. Holmes Perkins Architectural Rare Book Collection, supporting study in the history and theory of architecture from the sixteenth century through the twentieth (see http://repository.upenn.edu/library_papers/16/). There is a written collection development policy statement, accessible through the Penn Library web, for art, architecture and the built environment. The policy (at http://www.library.upenn.edu/collections/policies/art.html) undergoes periodic revision and update.

The collections of the Fine Arts Library began to form in 1890, when the School of Architecture was founded. At that time, the connection between architectural practice and drawing, painting, and sculpture provided a strong base for relatively broad development. At the present time, the acquisitions program in support of the M. Arch. (and of other degrees offered in the School of Design) calls for near-comprehensive collecting in certain areas of the history of architecture (e.g., monographic treatments of architects' work on a global basis) and research-level coverage in other areas of the history of architecture (e.g., building type studies) and across most relevant facets of architectural and related disciplines: architectural theory, design and drawing, architectural details and motifs, landscape architecture, regional planning, urban design, historic preservation. Monographic publication of the work of architecture firms has increased even beyond previous high levels, in paper (and beginning to be in electronic) form.

Overall, our objective is to provide immediate access in the Fine Arts Library to a working collection of frequently-used materials sized to the functional collection capacity of the shelving (maintained at about 80% of available shelf space). Over time, because of finite shelving space in our building, and the continuing activity of architectural publishers, there will be a progressively higher percentage of in-demand books in the High Density Shelving Facility.

In addition to the English-language book acquisition program for trade and university press books (implemented by the firm Yankee Book), the Fine Arts Library receives automatic book shipments for architecture and contemporary art from Harrassowitz (German) , Casalini (Italian), Erasmus (Dutch), and Worldwide (international art exhibition catalogs published outside the trade and university press areas). Regular notifications (evolving toward electronic format) are received from these vendors

and from Puvill (Spain and Mexico) and Touzot (France) for art and architecture generally. Systematic approval arrangements are developing for some European areas (e.g., the former Soviet bloc). But the curriculum's developing global scope and multimedia dependence challenge the library in the acquisition of necessary resources. For example, some formats (e.g., performance art on DVD) may be outside established distribution channels or be otherwise difficult to obtain (e.g., mapping of the Middle East). Because certain kinds of architectural publications are not covered by the plans (e.g., building codes and cost data; building materials specification books; professional association publications) these are ordered directly by Fine Arts Library staff. At any time, faculty and students are free to ask the library to order particular titles not covered under the approval plans. Requests for materials of significant cost are discussed and acted on by Penn Libraries staff.

Most of the collection is housed in an open stack environment; with some exceptions, and most of it circulates. Virtually all materials are represented in *Franklin* (the University of Pennsylvania's online public access catalog; http://www.franklin.library.upenn.edu/) and may be requested by any user. Books, journal articles and other materials placed on course reserve are easily obtainable in hard copy or through the Blackboard course management software. The library is open 93.5 hours each week during the academic year; reduced hours are maintained during the summer and interim periods. Regular hours of opening are 8:30 AM to Midnight.

b.) The serials collection includes a core body of national and international architectural journals in extensive or complete sets, including certain older titles such as *American Architect and Building News* and *The Builder*. Available periodical indexes (increasingly with an online full-text component achieved through linking) include *Avery Index to Architectural Periodicals*, *Wilson Art Full Text*, *Art Index Retrospective*, *ArtBibliographies Modern*. Some important indexes, such as *Architecture Publications Index,* are freely available on the web. The library collects 95% of the titles on the AASL Core List; 73% of the Supplementary List. As a result of the librarian's conversations with faculty and students in the M. Arch. program, new journal titles are considered and added on a regular basis. Conversion to electronic format is ongoing, subject to the e-publisher's handling of text and, especially, image content.

In recent years the Fine Arts Library has strengthened collections in areas of developing and continuing interest, including Philadelphia's physical fabric. For example, we have added 1500 images of Philadelphia streetscapes (ca. 1980) to the online image collection (http://dla.library.upenn.edu/dla/fisher/index.html) in support of the study and teaching of the city's planning and design. We created a freely accessible, searchable database of reports documenting Philadelphia neighborhoods from 1946 to 1990. *Philadelphia Neighborhoods: Histories, Plans and Futures* (http://sceti.library.upenn.edu/PhilaNeighborhoods/) offers through text, maps, and photographs a unique, contemporary perspective of the city's communities and their architecture, housing, education, recreation, industry, transportation, land use, zoning, shopping, parking, and security.

Electronic resources are presented in a way that allows the user to choose from multiple subject options. More important, the clusters of online resources appearing under relevant headings (e.g., "Architecture", "Historic Preservation") support interdisciplinary inquiry in a direct way. For example, the resource cluster within the "Architecture" section of E-Resources includes links not only to the *Avery Index to Architectural Periodicals,* but to other relevant resources as well, including *Index to Current Urban Documents*, and *Dissertation Abstracts* (including full text of many dissertations). At the same time, the Penn Libraries web resources are useful for deeper inquiry within particular areas, such as architectural theory.

The mode of access to the journal literature in the broad horizon of subjects principal to our responsibility is in a state of change. Overall, during the last 5 to 10 years we have seen an uneven migration from print to electronic. While we maintain a core body of journals in all of the subjects we cover (including many older titles such as *American Architect and Building News* and *The Builder*), electronic access is burgeoning. Increasingly, the Fine Arts Library audience is depending on the full-text content presented by JSTOR, Ebsco, Sage, Elsevier, Wilson Art Full Text, Project Muse, and ABI Inform, as well as information clusters marketed by

individual publishers (e.g., MIT Press, Urban Land Institute). Our audience is also accessing texts through Google and Google Scholar. By our own experience assisting users (especially undergraduates), we sense that many are restricting their searching to full-text databases, such as JSTOR and Ebsco Megafile.

The decline in fulfillment performance of print journal vendors in the art and architecture subject area has caused an increase in our time spent on claiming issues. Some journals are moving to electronic format, and we pay attention to that option and act accordingly, but many remain in print format. This is an area of concern because it threatens to bleed time from other tasks, e.g., post-cataloging processing of purchased rare books. In partial answer, we have moved routine periodical work in order to offer some time protection to the staff member responsible for periodical check in and rare book processing.

c.) and d.) Visual Resources and Non-Book Resources

The Fine Arts Library collections include relatively small holdings of urban maps, birds' eye views, and prints. All of this material was acquired for the library by G. Holmes Perkins, former Dean of the School of Design and longtime faculty member. Over the last three years, Penn Libraries Information Processing Center staff have cataloged the maps and now are processing the views and prints. It is possible that we will add selective maps in support of study of the development of cities, an area of continuing interest here.

The Architectural Archives, administered by the School of Design but located on the lower level of the Fine Arts Library building, collects and preserves the works of over 400 designers from the 18th century to the present. The Architectural Archives gained its international reputation initially through the Louis I. Kahn Collection whose resources include all drawings, models, photographs, correspondence, and project files from Kahn's office. Purchased by the Commonwealth of Pennsylvania from the Kahn estate, the Collection was placed on permanent loan to the University by the Pennsylvania Historical and Museum Commission in 1978. The Kahn Collection attracts a steady stream of international visitors and has served as the basis for innumerable publications and exhibitions.

Other major architects whose work is represented in the Architectural Archives include Alfred Bendiner, Cope and Stewardson, Paul Philippe Cret, Frank Miles Day, Wilson Eyre, Frank Furness, Edmund Gilchrist, Lawrence Halprin, Warren Powers Laird, Mitchell/Giurgola, John Nolan, Frank Lloyd Wright, and Zantzinger Borie and Medary. The Architectural Archives also collects the work of several significant European architects. The Friedrich Weinbrenner collection is the most important archive of this architect's work outside of Europe and provided the basis for a major exhibition and scholarly catalogue by Professor David B. Brownlee.
There are collection-level records of Architectural Archives materials in Franklin. The relationship between the Archives and the Fine Arts Library is cordial; there have been several instances of specific cooperation in specific gift episodes. There could stand to be more substantial cooperation and communication, to the benefit of the Archives' as well as the Fine Arts Library's users.

The Fine Arts Image Collection is a unit within the Fine Arts Library. The collection is staffed Monday through Friday 8:30 AM to 5:00 PM. The collection holds approximately 500,000 cataloged slides and 150,000 cataloged digital images. About 1,000,000 purchased or licensed fine arts digital images are available overall through the Penn Libraries web. Slides are organized according to the Fogg Classification Scheme. Overall, architecture and urban planning make up roughly one half of the entire collection. Digital images are held in Tiff, Mr. Sid and JPEG format. Currently, 250,000 slides are cataloged in MARC format and are searchable online at http://dla.library.upenn.edu/dla/fisher/index.html. There are 100,000 online descriptive records for images of architectural subjects; of these, 75,000 records include the images themselves. These images are available to faculty and students in the M.Arch program for incorporation in their teaching activities.

The Image Collection is primarily a teaching resource for Penn faculty and students. Analog image resources (i.e., slides) for art history, architecture, city planning, landscape architecture and fine arts are housed in one facility accessible to the entire campus. The growing, web-mounted digital image collection is accessible to Penn faculty and students from wherever they may be working, on or off campus. Reference service is provided in-person, by e-mail

and by online chat. Information about how to access and use the collection is available on the Image Collection section of the website. On a regular basis, faculty order scans of images for use in class presentations and for mounting on the web for student study. Our image resources grow by other means, including direct acquisition of digital images of architectural subjects, based on the Fine Arts Image Collection Development policy. Photography, image acquisition and image processing are part of the general materials allocation for the Fine Arts Library. Expenditures for licensed resources such as ARTstor, Archivision, and Scholars Resource are part of the Electronic Resources Fund of the Fine Arts Library. Additional visual formats are available to the user. The Fine Arts Library acquires DVDs on a regular basis. Together with all other library collections they are accessible through *Franklin*, the University of Pennsylvania's online public access library catalog.

e.) Collections are housed appropriately in clean settings. Items are bound and archivally boxed as appropriate. A commercial vendor binds books and creates phase boxes as needed. There is no in-house conservation or preservation program in the Penn Libraries. The Penn Libraries is expected to make a professional leadership appointment in this area within the next few years.

3.9.2 Services

1. Reference

Directional assistance is provided by Circulation/Reserves staff whenever the library is open. Professional reference service, whether brief or extensive in nature, is available on weekdays from 8:30 AM to 5:30 PM, and on Saturdays during term. It is also available online in the evenings and on weekends. Reference staff provide service at a desk in close proximity to the online public access catalog (*Franklin*) and to library web resources and to the print reference collection. Reference questions may be asked via web form. Appointments for research consultation and course-related library instruction may be made on the Penn Library web. The use of the book reference collection has declined; changes are being considered in the deployment of that collection.

2. Information Literacy

Library "Instruction" and Users' Information-Seeking Behaviors: A Continuing Challenge

Each year, we reach all incoming graduate students in the School of Design and the History of Art through distribution of informational materials and, where possible, in-person communication in small groups. For those students who keep the handout, the system works. For the others who do not, we need to place these guides on the web (through the PennTags process, perhaps) and push their availability to faculty and students using all tools possible, including social networking and blogging.

By our contact with undergraduates, we know that immediate access to full text and images is preferred *and that many of them are restricting their information-seeking to the realm of electronic resources only.* Further, we are seeing developing preference for entirely or predominantly full text resources like JSTOR and Ebsco Mega File over targeted subject databases, (e.g., Avery Index), even with available full-text linking. The high-quality individual database, developed to address research and curricular needs, is subject to being bypassed.

Three staff members provide orientation to print and electronic resources at the beginning of each term and upon request thereafter. Bibliographic and library instruction is not a formal part of the curriculum; however, many faculty ask us for these services. These basic sessions orient the user to the facility's physical layout, to public service points where help can be found, to location of collections, and to the substantive content of the library catalogs and information bases available through the library's web interface. In addition, School of Design and History of Art course-specific instruction (including instruction designed specifically for students in the M.Arch program) provides guidance in identifying and using information resources for study and research. These customized sessions incorporate live demonstration of the use of the Penn Library web and are given during class time or outside of class. The instruction seeks to build students' capacity to assemble a cluster of key information bases among the vast array of available resources. As the student develops knowledge about the topic at hand, his or her critical awareness of library resources should increase as well – reducing the "background noise" caused by the overabundant information resource stream.

For several years, the Chair of the Department of Architecture has encouraged the department's teaching assistants to schedule Fine Arts Library orientation and instruction sessions for students in the program.

3. Current Awareness

The Fine Arts Library's website, at http://www.library.upenn.edu/finearts/, is a center of information about library collections, services, and activities.
The Penn Library offers the *New Books Plus* service, a web-mounted presentation of acquisitions newly cataloged into the Penn Libraries collection: http://newbooksplus.library.upenn.edu/cgi-bin/nbp.cgi.

The Fine Arts Librarian meets with School of Design faculty on a regular basis (including at selected faculty meetings, as invited by the Dean) and distributes by e-mail information about newly-available resources.

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4. Access to collections

a.) The Penn Libraries' catalog records are created in accordance with national standards including MARC21 and AACR2. The University of Pennsylvania is a member of the Online Computer Library Center (OCLC) and contributes its catalog records to OCLC's national database, WorldCat. The WorldCat bibliographic file serves as a comprehensive union catalog for books, serials, archival collections, manuscripts, maps, musical scores, sound recordings, films, photographs, posters, computer files, electronic resources and more. Its public interface, FirstSearch, is one of the database choices that may be selected by Penn faculty and students at computers located in the Fine Arts Library and elsewhere. Additionally, library materials (cataloged, on-order and in-process) are made available through the local catalog, Franklin (http://www.franklin.library.upenn.edu/) and our federated-search interface, FindIt! (http://www.library.upenn.edu/).

Most of the collection is housed in an open stack environment. Virtually all materials are represented in *Franklin* and may be requested by any user. Books, journal articles and other materials placed on course reserve are easily obtainable; their locations are listed in *Franklin*. In addition, depending upon the wishes of the faculty member, Reserves materials are available in digitized form on the web and through electronic courseware.

Overall, the Penn Libraries website provides useful and important information to the user community. The Penn Libraries web's digital collections (including information bases, electronic texts, images, finding aids and subject guides) constitute an increasingly important (and central) element of the library's total offering. Many areas of the website provide the reader with the opportunity to communicate with library staff and request more information. In this way, the website facilitates access to collections and services. Technical help is available to users having difficulty connecting to the Penn Libraries web resources. The library is accessible to persons with physical challenges.

b.) The circulation policy is available in written form and through the library web. Overall, the Fine Arts Library is a circulating collection; however, some materials do not circulate. We have created a distinct group of handbook-like material for short-term circulation (e.g., two weeks), in order to better serve the M. Arch. students working in studio. These handbooks are intended to circulate heavily among a large group of users.

c.) Most course reserves readings are available through the online Blackboard system. We do a substantial amount of scanning of required textual material as well as linking to already-available online resources.

5. Cooperative agreements

To facilitate the provision of books and journal articles not owned by the Penn Libraries system, the Interlibrary Loan Department participates in several national and regional resource sharing programs. Materials are also acquired for libraries throughout the world using the OCLC interlibrary loan system. Delivery to campus is expedited through a Pennsylvania statewide courier system. Penn is also a founding member of a patron-initiated request and delivery system for monographs, BorrowDirect, which operates among seven large university research libraries in the Northeast. Through BorrowDirect, Penn patrons are able to search the combined virtual catalogs of Brown, Columbia, Cornell, Dartmouth, Princeton, and Yale, and request expedited delivery of books not available at Penn. E-Z Borrow, a network

of academic libraries in Pennsylvania and neighboring states, is also available. Borrow Direct and E-Z Borrow expect to deliver books within four working days of placement of the request by patrons. Dependence on recalling books has been reduced. Penn ILL utilizes Ariel software to expedite receipt of journal literature through the Internet, and offers electronic desktop delivery of articles directly to Penn patrons. Faculty Express delivers to Penn departmental offices requests for books and articles made by standing faculty. It is the policy of the Penn Libraries to subsidize the entire cost of acquiring materials through Interlibrary Loan, Borrow Direct, and E-Z Borrow for Penn faculty, graduate and undergraduate students, and staff.

3.9.3 Staff

1. Structure

The Fine Arts Librarian is responsible for managing the staff, services and collections of the Fine Arts Library. He reports to the Penn Libraries Director of Departmental Libraries, Resource Sharing, and Delivery Services and consults with staff throughout the organization. The Director of Collection Development and Collection Management, the Humanities Coordinator and the Social Science Coordinator provide guidance on a regular basis. By means of its collections and services, the Fine Arts Library supports the M. Arch. program's training in design, theory and technology. The Fine Arts Library staff facilitates the delivery of this support; in that sense, they are part of the educational team. The Fine Arts Library, which includes the Fine Arts Image Collection, has one professional librarian, one professional fine arts image curator, eight support staff, and student assistants. One member of the support staff has an accredited degree in library science. The overall level of staffing in the Penn Libraries can be characterized as lean.

2. Professional expertise

The Fine Arts Librarian was educated at Yale (B.A.), Columbia (M.A., M.S. (Library Service)) and the University of Delaware (Ph.D., History of Art; dissertation in Architecture). He has worked in library positions at Yale (Special Collections Cataloger), Maryland Historical Society (Head Librarian), George Washington University (Head of Special Collections and Subject Specialist for Urban and Regional Planning), and Johns Hopkins University (Subject Specialist for Art History). The Curator of the Fine Arts Image Collection graduated from the University of Kansas and has an M.A. in Art History from Washington University, St. Louis. She has held visual resources positions at the University of Missouri and Washington University, St. Louis. There are written position descriptions. The Fine Arts Librarian and the Fine Arts Image Curator are active in professional development.

3. Support Staff

The library has sufficient support staff to carry out current operations. The support staff is unionized and training takes place on the job. The academic preparation for the higher-level support staff positions has traditionally required a high school diploma as minimum academic training together with significant experience in library work. In recruitment, appropriate backgrounds can be sought in job applicants. The level of student staffing is appropriate. There are written position descriptions.

4. Compensation

Professional staff salaries in the Fine Arts Library are commensurate with those of others in the Penn Libraries system who have similar training and experience. The Penn Libraries support the librarians' professional development by providing limited funds for travel to national conferences. Support staff participate in task-centered library committees and can take classes offered by the university.

Facilities

1.) Space

The Fine Arts Library has about 20,000 square feet of usable floor space, and about 350 seats. The location of the library is convenient for the university's faculty and students and the Department of Architecture program. The Fine Arts Library (the former University Library, renamed the Furness Building after its architect, Frank Furness) was listed in the National Register of Historic Places in 1985. Major restoration work, planned and directed by the firm of Venturi, Rauch and Scott Brown, was carried out from 1987 through 1990, with rededication taking place on the

centennial of the original ceremony. In 1992 both the building and the library were formally renamed the Anne and Jerome Fisher Fine Arts Library to honor the principal donors to the restoration project.

The renovations established library office and service points around the perimeter of the celebrated central reading space. In addition, the renovation created a new book stack system as well as work and user space in the basement for the slide and image collection. The two main reading rooms constitute an exceptional space for quiet study and are occupied by a university-wide audience. Study carrels, assigned and used regularly by graduate students, are located on each floor of the stacks. As renovated, the perimeter spaces have not been fully contributory to the Fine Arts Library's program. For example, a room on the west side of the reading room became a staff lounge; the Periodical Reading Room on the east side offers only redundant seating and appears to have been conceived to feature the window system, thereby consuming space that might have been devoted to service- and library collection management-related uses. The renovations created an inadequate and small staff office whose function is confused by the necessity to offer public service and course reserves information.

We have revisited the function of some of these spaces, converting the staff lounge to a networked seminar room (with donated funds) which is now used regularly each semester by History of Art and School of Design classes. With two principal unitary reading spaces and a set of fixed room divisions – all sited within an architectural landmark – flexibility is limited.

Collection shelving space is finite: offsite shelving will become increasingly integral to the overall operation. The increasing availability of acceptable electronic formats mitigates the problem to some degree.

2. Environmental Factors and Security

Responsibility for maintaining lighting, heating, ventilation and other systems is held by the university's facilities operation. That office receives the requests and reports we submit to the School of Design's Manager of Facilities and Events. Library users and staff are sometimes impeded in their work by building issues. In terms of HVAC, our building is difficult to manage. Overall, we encourage university personnel to identify the root cause of a building problem instead of repeatedly fixing the same manifestation.

The temperature and humidity levels in the Fine Arts Library vary considerably from desirable standards; in addition, there is frequent fluctuation. In 2008, after years of poor operation of the HVAC roof units, centrally-funded replacements were installed. Overall, the building is very difficult to zone and the university's large capital improvements backlog limits corrective efforts.

The Fine Arts Library's book collection is protected by a theft detection sensitized strip system and sensing gate at the library exit. This equipment is aging and may degrade in performance (i.e., fail to recognize a book or books) before failing completely. For years, the Fine Arts Librarian has worked with Penn Libraries and university personnel to try to improve existing building systems for the protection of property and for user safety. In a multi-tenanted building, within a highly-decentralized university, communication and identification of responsibility are sometimes difficult.

The fire suppression system is adequate and is tested on a regular basis, as is building evacuation. There is a Penn Libraries-vetted plan for managing water and mold issues. The Fine Arts Librarian has attended NEH disaster training workshops and was a member of the Penn Libraries task force on dealing with water issues and establishing policy and procedure.

3. Equipment

The stack system could be extended in order to maximize shelving capacity in the Fine Arts Library; however, that would likely require the elimination of study carrels. The number of computer workstations, photocopiers, microform reader/printers, scanners, and slide viewers/sorters (now not much used) is sufficient for current needs. We offer a wireless signal to Penn affiliates within the building. There is reliable Internet access, with very occasional connectivity interruptions. Planned and unplanned building power interruptions require computer resets and verification of file integrity.

3.9.4 Budget / Administration / Operations

1. Funds

Library acquisitions are funded by allocation from the Penn Libraries, endowed funds held by the Libraries,

and endowed funds held by the School of Design. Funds are sufficient to maintain collections and services. Collection funding has been stable but without the rate of increase that would maintain full purchasing power against inflation and dollar weakness. The interdisciplinary nature of several of the School of Design disciplines means that several non-art (but highly relevant) databases (i.e. indexes, increasingly with links to full-text on the desktop), funded outside of the Fine Arts Library budget, are supporting the needs of School of Design students and faculty. This advantage may be curtailed to a degree by the globalization of the curriculum, and the resulting difficulties in maintaining consistent supply sources. The Fine Arts Librarian acts as bibliographer for architecture and the design professions and is responsible for print and electronic collection expenditures in those areas. The Fine Arts Library adds between 4,000 and 5,000 physical volumes each year. E-books acquired by the Penn Libraries represent an increasing element of collection development. New titles pertaining to architectural theory, history, design and construction account for about one-third of annual acquisitions. The Fine Arts Image Curator/Assistant Fine Arts Librarian shares selection duties and is responsible for the acquisition of art and architecture image resources. One Bibliographic Specialist also participates in collection development.

2. Efficiency of operations and services

The Fine Arts Library operates systematically and offers its users consistent service. The University of Pennsylvania operates in the context of an institutional vision entitled The Penn Compact (http://www.upenn.edu/compact/). The Penn Libraries' strategic plan, in formation, will include written goals and measurable objectives designed to support the university's objectives. The Fine Arts Library works in concert with the Architectural Archives of the University of Pennsylvania, a unit of the School of Design, in areas such as collection development and cataloging. We are interested in exploring additional areas of coordination.

Digital Present

The DLA (Digital Library Architecture) is a developing core aspect of the Penn Libraries. One of the early applications of DLA was Fine Arts Image Collection discovery and use functionality (http://dla.library.upenn.edu/dla/fisher/index.html). The DLA (Digital Library Architecture) is a piece of our software infrastructure that enables the web delivery of our digital content. It was developed by the Penn Libraries, using open source applications like Lucene, Solr, and Cocoon, and relies extensively on XML and XSLT. Developed in a generalist manner, it is meant to deliver virtually any library content, like images, book facsimiles, sound files, or simply, metadata records (for instance our EAD finding aids collection, or VCAT, the catalog that describes our physical DVD and VHS video collection). Every collection delivered through the DLA is enabled out of the box with features like facet browsing, search with relevance ranking, RSS and Media RSS feeds, and OAI metadata exposure. The delivery of each collection can be customized through the use of a "branding file" that controls the look-and-feel of the interface, and enables the choice of collection-specific facets, collection-specific fields to display in the result lists, and so on.

3. Participation of Faculty and Students

A number of formal and ad hoc advisory bodies are active in helping to guide the activity of the Penn Libraries. The Fine Arts Librarian and Fine Arts Image Curator consult with faculty and students on a continuous basis. Faculty and students are always welcome to make suggestions on needed acquisitions and on any aspect of the Fine Arts Library's services and collections.

3.10 Financial Resources

All schools at the University of Pennsylvania operate within the framework of responsibility centered management, in which all revenues and expenditures flow through one of the twelve schools or non-academic centers (such as the Institute for Contemporary Art, museum, Annenberg Center). The ground rules of the system are:

- Each school contributes 20% of its tuition revenues and other designated funds to a "subvention pool" administered by the provost, part of which is returned to the schools. Some schools are net recipients from the subvention pool (including PennDesign); others are net contributors.
- Net Tuition revenues, research funds, grants and gifts received by the school are

available for the use of the school. Tuition moves with students; when they enroll in a course in another school, 75% of their net tuition flows to the school teaching the course.

- Each school has an independent endowment, and the university sets a spending rule that determines the maximum that may be drawn down each year (currently approximately 4.8%). Over 90% of Penn's endowment is vested in the schools and centers.
- Each school must pay the full costs of its operations, including salaries, benefits, student financial aid, educational expenses, operations and maintenance of its buildings, and any improvements to its space and facilities.
- The schools are taxed for the full range of central costs of the university, ranging from the costs of the president's office to libraries to campus security to grounds maintenance. A variety of formulas are used to distribute these costs as equitably as possible across the schools and centers.
- Within this framework, schools must operate with balanced budgets. Any expenditures that exceed revenues (such as for capital investments) must be repaid over time with interest. Any surpluses remain in the school, and can be spent in subsequent years.

Revenues

The School of Design is largely tuition-driven, with 80% of its revenues coming from tuition earned by educating its undergraduate and graduate students. To attract the best students, the school must discount its tuition by about 28% to provide a pool of financial aid. In AY08-09, the M. Arch program generated approx. $6.5 million in tuition revenue for the school. The program awarded $1.5M in need-based, merit-based, minority, and diversity aid fellowships, $895,000 of which was funded by endowments designated for M. Arch students.

Expenses

In AY08-09, the M. Arch program's operating expenses totaled $3.7M. $2.9M, or 78% was dedicated to academic compensation (standing, practice professors, lecturers, teaching and research assistants) while $210,000 supported the direct administrative functions of the M. Arch program. The M. Arch program spent $460,000 in current expense to support the activities of the program. In addition, the Dean provided $51,000 for international traveling studios and $30,000 for faculty searches. M. Arch used designated endowment funds to support 4 faculty on professorships [$525K], students traveling abroad [$180K], and for awards and prizes [$26K]. The M. Arch program also received central administrative support from the school in the way of computing, admissions, registrar, development, budget and finance, and facilities services.

Development and Alumni Relations

Development and Alumni Relations efforts, critical to the support of the Department of Architecture's initiatives, are a priority of the Dean and the principal focus of a team of three development professionals dedicated to the School of Design. In Fall 2008, a new Development Office was hired. The School's Development Office is supported by the 200-member staff of Penn's central department of Development and Alumni Relations. This administrative arm provides such critical services to the School as prospect research, corporation and foundation relations, communications and technology assistance, and planned giving expertise, among others.

Over the past five years, the School's development office has focused on priorities identified by the Architecture department, including new endowed fellowship funds, increased fundraising for both restricted and unrestricted funds, greater participation in alumni annual giving, improved communications with architecture alumni, and a more active presence at professional meetings.

Over the past five years, alumni communications have increased from a semi-annual print newsletter, to the newsletter plus 10 monthly email newsletters, the Penn Online Community, and Red & Blue Online email newsletter.

As the University of Pennsylvania moves forward with a new capital campaign, development efforts will be directed to encourage investment in Penn's future – first and foremost in academic programs, faculty and students, but also in facilities and new technologies. Building endowment for the Department of Architecture is one of the School's highest priorities.

3.10.1 Provide data on annual expenditures and total capital investment per student, both undergraduate and graduate correlated to the expenditures and investments by other professional degree programs in the institution.

School of Design
NAAB Metrics
FY10 **GENERAL OPERATING** Budgets

Academic Compensation #	**Architecture ***	**LARP**	**CP**
	$3,529,739	**$1,663,778**	**$1,377,700**
Non-Academic Compensation			
	$246,297	**$103,228**	**$120,240**
Total Compensation			
	$3,776,036	**$1,767,007**	**$1,497,940**
Current Expense			
	$433,697	**$164,559**	**$145,308**
Total Budget			
	$4,209,734	**$1,931,566**	**$1,643,248**

Metrics			
Faculty, FTE^	38	16	19
Graduate Students	241	110	142
Graduate Students per Faculty	6.3	6.9	7.5
Estimated Graduate Course Units Taught	2,300	1,073	1,367
Estimated Undergraduate Course Units Taught	347	31	71
Current Expense per Course Unit	$164	$149	$101
Total Budget per Course Unit Taught	$1,590	$1,750	$1,143
Total Budget per Graduate Student	$17,468	$17,560	$11,572

Academic Compensation excludes professorships, sabbatical leaves, and other sources (i.e. IUR).
* Architecture includes graduate and undergraduate program expenses.
^ Faculty includes standing, associated, and part-time faculty. FTE conversion for part-time faculty is 3:1 .

3.10.2 Provide comparative annual budgets and expenditures for each year since the last accreditation visit, including endowments, scholarships, one-time capital expenditures, and development activities.

School of Design								
Department of Architecture								
General Operating: (Surplus) / Deficit Report								
Fiscal 2004 Actual - Fiscal Year 2010 Projection								
9-Dec-09								
		Actual	Actual	Actual	Actual	Actual	Actual	Projected
		FY04	F05	F06	F07	F08	F09	F10
Revenues								
Course Units Taught								
Number of Graduate Course Units Taught #		2,053	2,031	2,206	2,059	2,086	2,127	2300
Number of Undergraduate Course Units Taught		310	337	380	376	463	332	347
	Total Course Units Taught	2,363	2,368	2,586	2,435	2,549	2,459	2,647
Weighted Average Dollar per Graduate CU Taught		$2,404	$2,484	$2,578	$2,788	$2,903	$3,021	$3,169
Weighted Average Dollar per Undergraduate CU Tau		$1,880	$1,919	$1,690	$1,910	$1,855	$2,029	$1,997
Gross Tuition								
	Graduate	$4,935,412	$5,045,004	$5,687,068	$5,740,492	$6,055,658	$6,425,667	$7,288,700
	Undergraduate	$582,800	$646,703	$642,200	$718,160	$858,865	$673,628	$692,959
	Total Gross Tuition	($5,518,212)	($5,691,707)	($6,329,268)	($6,458,652)	($6,914,523)	($7,099,295)	($7,981,659)
Financial Aid								
	Need Based Aid	$654,300	$629,517	$689,801	$701,062	$647,025	$699,425	$726,275
	Merit Aid	$299,000	$304,350	$364,850	$377,500	$384,017	$492,000	$466,500
	Minority Aid	$28,000	$28,000	$125,783	$235,260	$285,480	$304,358	$192,126
	Undergraduate Aid	$165,515	$192,717	$201,009	$233,402	$279,131	$218,929	$232,141
	Total Financial Aid	$1,146,815	$1,154,584	$1,381,443	$1,547,224	$1,595,653	$1,714,712	$1,617,042
	Total Net Tuition	($4,371,397)	($4,537,123)	($4,947,825)	($4,911,428)	($5,318,870)	($5,384,583)	($6,364,617)
	Allocated Costs ^% (20%)	$874,279	$907,425	$989,565	$982,286	$1,063,774	$1,076,917	$1,272,923
	Total Revenues	($3,497,117)	($3,629,698)	($3,958,260)	($3,929,142)	($4,255,096)	($4,307,666)	($5,091,693)
Expenditures								
Academic Compensation								
	Standing Faculty !	$1,011,000	$736,252	$802,000	$637,000	$882,348	$834,023	$1,097,353
	Practice, Lecture A, or A1 Academician	$522,000	$369,697	$378,000	$625,000	$609,139	$627,823	$642,726
	Adjuncts, Lecturers, and Instructors	$855,000	$1,029,000	$953,000	$961,000	$1,128,300	$1,137,000	$1,074,125
	Teaching Assistants (PhD/Stipend)	$94,000	$70,000	$104,500	$114,000	$114,000	$114,000	$42,000
	Research Assistants (PhD/Stipend)							$16,000
	Employee Benefits	$573,495	$464,776	$481,841	$497,057	$580,755	$567,847	$657,585
	Total Academic Compensation	$3,055,495	$2,669,725	$2,719,341	$2,834,057	$3,314,542	$3,280,693	$3,529,739
Non-Academic Compensation								
	Professional Staff	$36,000	$36,960	$39,000	$39,976	$43,000	$44,419	$45,307
	Support Staff	$92,000	$94,729	$93,000	$95,747	$98,619	$103,674	$105,582
	Graduate Assistants (Master/Hourly)	$6,000	$6,000	$6,000	$5,000	$5,000	$5,000	$25,000
	Work-Study - Hourly	$15,000	$15,000	$15,000	$20,000	$20,000	$20,000	$20,000
	Employee Benefits	$42,822	$44,039	$44,142	$43,916	$45,237	$46,838	$50,408
	Total Non-Academic Compensation	$191,822	$196,728	$197,142	$204,639	$211,856	$219,931	$246,298
	Total Compensation	$3,247,317	$2,866,454	$2,916,483	$3,038,696	$3,526,398	$3,500,624	$3,776,037
Current Expense								
	Graduate	$325,000	$243,000	$270,500	$271,100	$282,930	$268,512	$379,650
	Undergraduate		$27,500	$17,000	$17,000	$22,800	$30,200	$30,200
	University Services (telephone ,mail, and	$18,000	$20,000	$20,000	$21,000	$21,630	$22,712	$23,847
	Total Current Expense	$343,000	$290,500	$307,500	$309,100	$327,360	$321,424	$433,697
	Total Expenditures	$3,590,317	$3,156,954	$3,223,983	$3,347,796	$3,853,758	$3,822,048	$4,209,734
	(Surplus) / Deficit	$93,200	($472,744)	($734,277)	($581,346)	($401,338)	($485,619)	($881,959)
	# Graduate course units include PhD							
	^ The undergraduate guarantee (under or over guarnateed) effects the weighted average of the undergraduate cu value							
	% The 20% tax on tuition net of aid represents dollars needed to pay for operations & maintenance, library, School and University services (payroll, legal, research etc							
	! Standing faculty excludes faculty on leaves and professorships.							

School of Design
Department of Architecture
Designated Endowment Funds by PURPOSE

Purpose/Fund	Market Value 28-Feb-07	FY08 Avail Income	FY09 Avail Income
Discretionary			
Architecture General	59,975	4,619	6,657
Lecture Series			
Ewing Cole Lecture	80,778	4,791	6,537
Sheldon Fox/Kohn Pedersen Fox Lecturers		7,050	12,837
Turner Construction	41,185	6,474	7,874
Total Discretionary	**121,963**	**18,315**	**27,248**
Prizes			
Brooke Memorial Prize	15,991	590	649
H. Coornvelt Memorial	25,211	3,841	3,673
Cret Design Medal	17,529	(54)	462
Day Memorial Prize	18,346	1,243	903
Gay Construction Prize	29,497	946	1,270
Laird Prize	10,892	764	1,167
Mehlhorn Prize	293,391	23,279	28,835
Parker Construction Medal	4,802	196	214
Prowler, Donald	95,382	5,734	5,759
Schneidman, Samuel	27,947	(2,156)	(1,969)
Warner James S. Memorial	11,419	432	798
Yaron, Michael	33,825	(2,437)	(2,000)
Total Prizes	**584,232**	**34,812**	**41,761**
Professorships			
Graham Professorship	2,770,767	112,096	127,918
Meyerson Professorship	5,080,797	216,227	231,954
Miller Professorship	3,046,258	105,737	112,403
Total Professorships	**10,897,822**	**434,060**	**472,275**
Traveling Fellowships			
Bockius	1,401,198	42,542	62,433
Chandler Foundation	846,900	26,343	32,373
Dales Lewis	2,821,511	79,688	100,768
Evans, Wendy Traveling Scholarship	132,100	6,776	8,388
Kermacy, Martin S.			8,430
Matlock Graduate Fellowship	206,062	12,593	18,082
Schenck Memorial	294,638	9,133	10,647
Stewardson Memorial	393,434	43,761	34,282
Woodman Scholarship	136,743	4,229	5,376
Total Travelling Fellowships	**6,232,586**	**225,065**	**280,779**
Total	**17,836,603**	**712,252**	**822,063**

3.11 Administrative Structure

3.11.1 Provide a statement verifying the institution's accreditation from the regional institutional accrediting agency for higher education

The University of Pennsylvania is accredited by *The Commission on Higher Education of the Middle States Association of Colleges and Schools.* The University has been accredited since 1921 and has been evaluated for accreditation approximately every 5 years. The University's most recent on-site evaluation was in 2005. The Commission accredits institutions of higher education in Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania and other locations along the eastern seaboard as well as locations abroad.

3.11.2 Provide a description of the school's administrative structure and a comparison of this structure with those of the other professional programs in the institution

The School of Design is administered by the Dean. The Chairs of the four Departments -- Architecture, Landscape Architecture, City Planning, and Fine Arts -- report to the Dean, as does the Chair of the Program in Historic Preservation. The Development Office consists of three staff positions that report to the Associate Dean for Development, who reports to the Dean. The Associate Dean, Administration, reports to the Dean and supervises the offices of the Registrar, Admissions, Facilities, and Finance. Each of these offices employs at least one person in addition to the Director of the office.

The Department of Architecture is administered by the Chair in conjunction with the Coordinator (who supervises the departmental office which includes three staff), the Associate Chair, and the Directors of the BA, M.Arch, MS, and PhD programs. The current Chair is also the Director of the M.Arch. program.

3.11.3 Provide a list of other degree programs, if any, offered in the same administrative unit as the accredited architecture degree program.

Department of Architecture
Doctor of Philosophy [Ph.D.]
Master of Science [M.S.]
Master of Architecture I, [M.Arch]
Master of Architecture II, Post-Professional [M.Arch]
Bachelor of Arts [B.A.] [Major in Architecture]
Bachelor of Arts [B.A.] [Intensive Major in Architecture]
Bachelor of Arts [B.A.] History, Theory, and Criticism Concentration
Dual degree programs, undergraduate
Bachelor of Arts [B.A.]/ Bachelor of Applied Science [B.A.S.]
Bachelor of Arts [B.A.]/Bachelor of Science in Engineering [B.S.E.]

Department of City & Regional Planning
Doctor of Philosphy [Ph.D.]
Master of Arts [M.A.]
Master of City Planning [M.C.P.]

Department of Fine Arts
Master of Fine Arts [M.F.A.]
Bachelor of Arts [Major in Fine Arts]
Bachelor of Applied Science [B.A.S] [Major in Digital Media Design]

Department of Landscape Architecture & Regional Planning
Master of Landscape Architecture [M.L.A.]
Bachelor of Arts [B.A.] [Major in Urban Studies]

Graduate Group in Historic Preservation
Master of Science [M.S.]

Dual Degree Programs
Master of City Planning/Master of Social Work
Master of City Planning/Juris Doctor
Master of City Planning/Master of Urban Spatial Analytics
Master of Architecture, Master of City Planning, Master of Science in Historic Preservation or Master of Landscape Architecture/MBA
Master_of_Architecture-Master_of_City_Planning
Master_of_Architecture-Master_of_Landscape_Architecture
Master_of_Architecture-Master_of_Science_in_Historic_Preservation
Master_of_City_Planning-Master_of_Landscape_Architecture
Master_of_City_Planning-Master_of_Science_in_Historic_Preservation
Master_of_Fine_Arts-Master_of_Landscape_Architecture

Master_of_Science_in_Historic_Preservation-
Master_of_Landscape_Architecture

Certificate Programs
Ecological Architecture Certificate
Historic Preservation Certificates
Advanced Certificate in Architectural Conservation and Site Management
Real Estate Design and Development Certificate
Graphic Design
Time-Based and Interactive Media
Land Preservation Certificate
Urban Design Certificate
GIS and Spatial Analysis Certificate
Landscape Studies Certificate
Urban Redevelopment Certificate

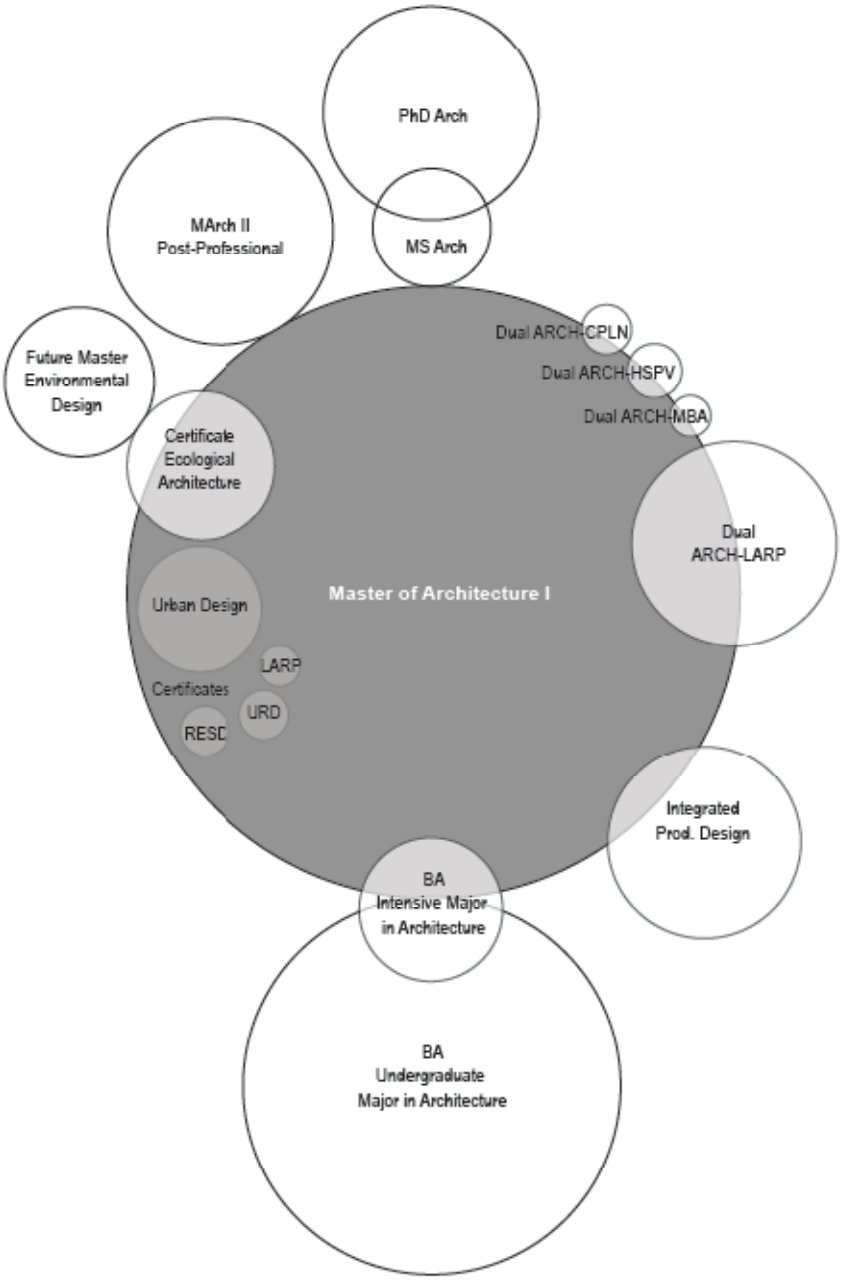


Fig. 3.11.1. This diagram indicates the variety of programs – or pursuits - available to students in the Department of Architecture. Circle size is proportional to the number of students in each program in 2008-09.

3.12 Professional Degrees and Curriculum

3.12.1 Provide Title(s) of the degree(s) offered; an outline, for each accredited degree program offered, of the curriculum showing the distribution of general studies, required professional courses (including prerequisites), required courses, professional electives, and other electives;

At Penn we offer only one professional degree in architecture, the Master of Architecture. The Master of Architecture program is comprehensive and rigorous, preparing graduates for the full range of activities in the profession. It provides a thorough base of knowledge in history, theory, technology, ecology, society, and professional practice, while developing skills in design through an intensive sequence of design studios. Studios are the focus of the program and are supported by courses in visual studies that develop skills first in traditional modes of drawing and conceptualization, then in digital and new media. At the upper levels of the program students establish individual trajectories by selecting from a range of elective studios and courses with leading figures in design, technology and theory. The final year culminates in advanced design studios that include research directed by leading designers as well as the option of an independent thesis. Summer programs abroad and studios based in other countries provide opportunities for international studies. The program aims to develop critical, creative and independent thinking that realizes potentials within an ever-changing world.

A total of 28 course units are required for the Master of Architecture Professional degree. Students are permitted to take an additional 2 course units in optional electives for a maximum total of 30 course units. To attain the degree, a student must complete the following required courses: 10 course units in design studio, 5.5 in technology, 3 in history and theory, 1.5 in visual studies, and 2 in professional practice. In addition to required courses, students must take 4 electives. A research studio or independent thesis (2 course units) is required in the final semester. The program offers several study abroad options each year.

Students entering the Professional Degree Program with an undergraduate degree in a subject other than architecture undertake a three-year course of study comprising 28 course units. (Typical courses are 1 cu, studios are 2 cu.) Students with a four-year undergraduate degree in architecture may receive Advanced Standing of up to one year

Although part-time study is allowed, students are required to complete a minimum of two semesters of full-time studies in residence. To be a full-time student requires a minimum of four course units per semester. To complete the degree requirements, those students who elect to take less than four or five course units per semester may enroll in one of the Summer Programs or return in the following academic year on a full-time or part-time basis.

For details of course descriptions, please see our website: www.upenn.edu/gsfa/arch/index.htm

3.12.2 Provide examples, for each accredited degree offered, of the minors or concentrations students may elect to pursue

The Master of Architecture Program may be combined as a four-year dual degree with a variety of other degrees in the School and University, and may include within the normal course of study a 5 cu certificate programs such as Historic Preservation, Urban Design, or Real Estate Design and Development (see full listing in section 3.11.3).

3.12.3 Provide a list of the minimum number of semester credit hours or the equivalent number of quarter credit hours required for each semester or quarter, respectively; a list identifying the courses and their credit hours required for professional content and the courses and their credit hours required for general education for each accredited degree program offered

Master of Architecture Professional Degree Curriculum

Year 1	Fall	CU	SH		Spring	CU	SH
ARCH 501	Design Studio I	2	6.0	ARCH 502	Design Studio II	2	6.0
ARCH 511	History and Theory I	1	3.0	ARCH 512	History and Theory II	1	3.0
ARCH 521	Visual Studies I	0.5	1.5	ARCH 522	Visual Studies II	0.5	1.5
ARCH 531	Construction I	0.5	1.5	ARCH 532	Construction II	0.5	1.5
ARCH 533	Environmental Systems I	0.5	1.5	ARCH 534	Environmental Systems II	0.5	1.5
ARCH 535	Structures I	0.5	1.5	ARCH 536	Structures II	0.5	1.5
Year 2		5	15			5	15
ARCH 601	Design Studio III	2	6.0	ARCH 602	Design Studio IV	2	6.0
ARCH 611	History and Theory III	1	3.0	ARCH 632	Technology Designated	1	3.0
ARCH 621	Visual Studies III	0.5	1.5	ARCH 638	Technology Special Topics	0.5	1.5
ARCH 631	Technology Case Studies	1	3.0	ARCH 672	Professional Practice II	0.5	1.5
ARCH 671	Professional Practice I	0.5	1.5		Elective I	1	3.0
Year 3		5	15			5	15
ARCH 701	Design Studio V	2	6.0	ARCH 704	Advanced Design Studio	2	6.0
	Elective II	1	3.0	ARCH 772	Professional Practice III	1	3.0
	Elective III	1	3.0		Elective V	1	3.0
	Elective IV (Optional)				Elective VI (optional)		
		4	12			4	12

Total Graduate Course Units (CU)	28
Total Graduate Semester Hours (SH)	84.0
Typical Undergraduate Semester Hours	124.0
Total Undergraduate and Graduate Semester Hours	208.0

3.12.4 Provide a list of off-campus programs, description of facilities and resources, course requirements, and length of stay.

SEMESTER ABROAD PROGRAM

Architectural Association (AA), London
During the fifth term of the Master of Architecture Program, up to fifteen students a year may enroll for the semester abroad program in London, England. This is coordinated by Professor Homa Farjadi and is housed at the Architectural Association (AA), located on Bedford Square in the heart of Bloomsbury. Students enroll in a special design studio, ARCH 702, taught by Prof. Farjadi, and in two elective courses offered by the faculty at the AA.

SUMMER STUDIES ABROAD PROGRAMS
In the summer abroad programs, students study and travel for approximately 4 weeks at the beginning of the summer (mid-May through mid-June) and receive 1 elective course unit of credit. These programs are open to both graduate and undergraduate students.

Summer Program in Paris
This program is a long-established academic program that combines lectures about Parisian architecture and urbanism from important authors, architects and engineers, with accompanied tours to buildings, parks and professional offices. Recent programs have addressed questions central to the city of Paris, including issues of urbanism and technological trajectories through which a particular history of Parisian architecture can be traced.

Summer Program in Mexico City
This program provides an introduction to the issues and conditions faced by a large city such as Mexico City and relates them to contemporary architectural

and urban practices and theories. This course includes lectures, site visits, case studies and short but intense analytical/design exercises. In addition, the comprehensive program presents some of the dominant architectural, urban, historical and geographical narratives that shape the built environment in the city today.

3.13 Student Performance Criteria

Provide an overview of the school's curricular goals and content and a matrix cross-referencing each required course with the performance criteria it fulfills.

University of Pennsylvania
School of Design
Department of Architecture

2009 NAAB Course Assessment Matrix

F Fullfillment
P Partial Fullfillment

			Design Studios				W'SHPs			H & T			TECHNOLOGY							PRAC		
			ARCH 501: Design Studio I	ARCH 502: Design Studio II	ARCH 601: Design Studio III	ARCH 602: Design Studio IV	ARCH 521: Visual Studies I	ARCH 522: Visual Studies II	ARCH 621: Visual Studies III	ARCH 511: History & Theory I	ARCH 512: History & Theory II	ARCH 611: History & Theory III	ARCH 531: Construction I	ARCH 532: Construction II	ARCH 533: Environmental Systems I	ARCH 534: Environmental Systems II	ARCH 535: Structures I	ARCH 536: Structures II	ARCH 631: Tech. Case Studies	ARCH 671: Professional Practice I	ARCH 672: Professional Practice II	ARCH 772: Professional Practice III
A	13.01	Speaking and Writing Skills	P	P	P	P				F	F	F										
A	13.02	Critical Thinking Skills	P	P	P	P				F	F	F										
A	13.03	Graphic Skills	P	P	P	P	F	F	F													
A	13.04	Research Skills								P	P	P							F			
U	13.05	Formal Ordering Systems	F	F	P	P	P	F	P	P	P	P										
A	13.06	Fundamental Design Skills	P	P	F	F	P	P	P													
A	13.07	Collaborative Skills	P			F													F			
U	13.08	Western Traditions								F	F	F										
U	13.09	Non-Western Traditions								P	F	P	P									
U	13.10	National & Regional Traditions								F	F	F										
A	13.11	Use of Precedents		F	F	P				P	P	P							P			
U	13.12	Human Behavior		F	P	P				P	P	P			P	P						
U	13.13	Human Diversity		F	P					P	F	P								F		
A	13.14	Accessibility	P	P	F	P							P	P								
U	13.15	Sustainable Design			P	P							P	P	F	F			F			
A	13.16	Program Preparation	F	F	F	F														P		P
A	13.17	Site Conditions	P	F	P	P					P	P	P	P	F	P			P			
U	13.18	Structural Systems	P	P	P	P							P	P			F	F	F			
U	13.19	Environmental Systems											P	P	F	F			F			
U	13.20	Life-Safety Systems			F	P							F	F	P	P			F			
U	13.21	Building Envelope Systems			P	P							F	F	P	P	P	P	F			
U	13.22	Building Service Systems			P	F							P	P		F			F			
A	13.23	Building Systems Integration		P	P	F								P		F			F			
U	13.24	Building Materials and Assemblies			P	P							F	F	P	P	P	P				
U	13.25	Construction Cost Control											P	P					P			F
A	13.26	Technical Documentation				F	P	P	P				F	P					F			
U	13.27	Client Role in Architecture	P	P															F	F		F
A	13.28	Comprehensive Design				F								P			F	F	P			
U	13.29	Architect's Administrative Roles																	P	P	P	F
U	13.30	Architectural Practice										P							P	P	P	F
U	13.31	Professional Development																		P		F
U	13.32	Leadership										P								P	P	F
U	13.33	Legal Responsibilities											P	P						P	P	F
U	13.34	Ethics and Professional Judgement	P	P	P	P				P	P	P	P	P		P				P	P	F

A = Ability, U = Understanding

1/21/2010

The curriculum enables students to progress from the foundation level to the state of the art in architectural design, history, theory, representation, technology and professional practice. Students are then able to proceed to advanced levels in self-selected areas of study through elective courses and studios. The following descriptions and Criteria chart demonstrate that the NAAB's Student Performance Criteria are met within the required components of the foundation and core curriculum.

3.13.1. Speaking and Writing Skills

Ability to read, write, listen, and speak effectively

Students develop the ability to speak effectively during presentations of their work in design studios and seminar courses. Written assignments in the theory/history courses, ARCH 511, 512, & 611, as well as some technical and professional practice courses require students to formulate, develop, and express ideas in written form. Students are given feedback on their writing in the grading of papers and on their verbal skills in the studios. Starting in AY 09-10, all design studios are required to include a written component, to help students develop and frame the arguments for their design work.

3.13.2. Critical Thinking Skills

Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test them against relevant criteria and standards

The ability to analyze and evaluate buildings, building complexes, and urban spaces is developed throughout the program, in design studios and in courses in theory/history, technology and professional practice. Case studies are frequently used in this regard and are studied from technical, as well as formal and social perspectives. The ability to analyze is turned toward creative design and decision-making throughout the studio sequence. In individual desk critics, group discussions and formal reviews students are encouraged to develop a questioning, rational, and coherent approach to analysis and evaluation.

3.13.3. Graphics Skills

Ability to use appropriate representational media, including freehand drawing and computer technology, to convey essential formal elements at each stage of the programming and design process

A variety of fundamental graphic skills introduced and explored as part of the visual studies workshops, ARCH 521, 522, and 621 in parallel with the core design studio sequence. Advanced techniques are also taught in a number of elective design techniques courses.

3.13.4. Research Skills

Ability to gather, assess, record, and apply relevant information in architectural coursework.

Research skills are developed in the core design studios and courses in theory/history, technology, and professional practice, where programming is less central. Librarians in the Fisher Fine Arts Library provide instruction on research methods and tools common to the social sciences, humanities and engineering and assist students throughout their studies in developing effective research techniques specific to the different areas of the curriculum. Instructors also provide guidance for research specific to subjects and assignments in their courses and studios.

Advanced studios and elective courses place additional emphasis on design research and provide instruction on research methods in specific areas of investigation. To develop the culture of advanced research within the program, and to expose students more consistently to the variety of research methodologies employed in contemporary architecture.

3.13.5. Formal Ordering Systems

Understanding of the fundamentals of visual perception and the principles and systems of order that inform two- and three-dimensional design, architectural composition, and urban design

This understanding is nurtured through both historical as well as contemporary case studies, which are taught as part of the design studios as well as courses in theory/history, technology and professional practice. Courses in theory/history present the history and theory of formal ordering systems, from classical to modern architecture, which continue to be a point of reference for contemporary design. Such fundamental understanding is an important element of the foundation design studios: ARCH 501 & 502,

where this understanding is made manifest in design projects.

3.13.6. Fundamental Design Skills

Ability to use basic architectural principles in the design of buildings, interior spaces, and sites

Ability in this area is developed through the core design studios through a careful sequence of assignments that build knowledge and skill. This is reinforced through understanding of organizational, spatial, structural, and constructional principles gained in core courses in visual studies, theory/history, technology, and professional practice. Studies of conceptual models and precedents are often used throughout the curriculum. Students develop their design abilities in studios by testing and refining design proposals. Faculty provide feedback in the form of desk crits, group discussions, and reviews of design projects. The studios serve to integrate knowledge and skills acquired in specialized technical courses in order to produce synthetic design proposals.

Elective design studios reinforce these fundamental abilities while going beyond them to familiarize students to more sophisticated principles and models.

3.13.7. Collaborative Skills

Ability to recognize the varied talent found in interdisciplinary design project teams in professional practice and work in collaboration with other students as members of a design team

Ability to undertake collaborative work is developed through group assignments in design studios, visual studies, theory/history, technology and professional practice courses. Through group assignments, students come to understand architectural practice as a team effort in which individuals play different and complementary roles. The cooperative relationship between architect and engineer is emphasized in technology courses, many of which are taught by engineers in practice.

Beginning in 2008, the foundation studio, ARCH 602, focuses on integrative design and collaborative team work. Students are organized in design teams for the whole semester, and consultants provide expert input throughout the semester.

3.13.8. Western Traditions

Understanding of the Western architectural canons and traditions in architecture, landscape and urban design, as well as the climatic, technological, socioeconomic, and other cultural factors that have shaped and sustained them

ARCH 511: History and Theory I and ARCH 512: History and Theory II review the history of architecture including contemporary movements. ARCH 611: History and Theory III examines topics of theory in architecture. Electives in architectural theory, including ARCH 71a and 712 explore advanced topics in the theory of architecture.

3.13.9. Non-Western Traditions

Understanding of parallel and divergent canons and traditions of architecture and urban design in the non-Western world

Understanding of non-western traditions is developed in various aspects of the curriculum. ARCH 511 and 512 review the history of architecture including non-Western examples, as does ARCH 531. Non-western traditions are also incorporated into the elective courses such as ARCH 712 Designing Asia, ARCH 776 Chinese Architecture.

3.13.10. National and Regional Traditions

Understanding of national traditions and the local regional heritage in architecture, landscape design and urban design, including the vernacular tradition

Understanding of national and regional traditions is acquired by students in the core design studios and courses in theory/history and technology, providing a rich and complex understanding through these multiple perspectives: formal, stylistic, technical, and environmental. Core studios are often sited in the Philadelphia area and nurture understanding of local histories and conditions. Case studies in design, technology and history are often drawn from the region and the country.

3.13.11. Use of Precedents

Ability to incorporate relevant precedents into architecture and urban design projects

Students develop this ability throughout the curriculum: in the design studios, visual studies courses, theory/history courses and professional practice courses. Instructors review exemplary methods of documentation and analysis as well as criteria for evaluating the potential of precedents for new design proposals. Students are expected to articulate their rationale for precedents during oral presentations of their work.

3.13.12. Human Behavior

Understanding of the theories and methods of inquiry that seek to clarify the relationship between human behavior and the physical environment

Students are made aware of theories and methods of inquiry into the relationship between ways of living and the physical environment, between culture and building form, in studios as well as in courses in theory/history and technology. Courses in environmental systems emphasize the relationship between design, behavior and comfort. The design studios apply such awareness in the formulation of architectural projects. Theory/history courses require demonstration of such awareness in terms papers on specific examples or topics.

Beyond the core curriculum, students are able to advance their awareness of human behavior and related cultural perspectives through elective courses in the program and in other departments of the School of Design and the University.

3.13.13. Human Diversity

Understanding of the diverse needs, values, behavioral norms, physical ability, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity for the societal roles and responsibilities of architects

Issues of human diversity are explored in the design studios, the theory/history sequence, in certain technology courses and professional practice. A portion of the student body are able to participate in semester abroad and summer programs in Mexico and Paris, but many more are involved in upper-level studio travel that directly engages the issues of design in diverse cultures, from Mexico City, to Shanghai, to the multi-year studio project in Bangladesh. The TC Chan Center for Energy and Simulation Studies is directly affiliated with Tsinghua University in Beijing, with PhD students exchanged between the two programs.

For over 25 years, the Department has participated in Architecture in Education, a program of teaching architecture in Philadelphia area schools started by the American Institute of Architects. Two to five students a semester participate.

3.13.14. Accessibility

Ability to design both site and building to accommodate individuals with varying physical abilities

An understanding of accessibility is developed in core Design Studios and in several technology courses. The regulatory framework with respect to accessibility is taught in ARCH 722, Professional Practice III. The ability to design for these needs is developed in ARCH 601, Design Studio III.

3.13.15. Sustainable Design

Understanding of the principles of sustainability in making architecture and urban design decisions that conserve natural and built resources, including culturally important buildings and sites, and in the creation of healthful buildings and communities

The technology core sequence emphasizes sustainable design technologies, and the relationship between technology and ecology, especially ARCH 533 & 534. The program fosters a holistic approach to design within natural systems. Conservation of resources and environmental concerns are also integral to the core design studios, especially ARCH 601.

The new certificate program in Ecological Architecture, developing into a new Masters Program, has formalized a number of offerings in this subject area. The technology electives, ARCH 713, Ecology, Technology, and Design, and ARCH 734, Ecological Architecture enable students to develop an understanding of the state of the art at an advanced level.

3.13.16. Program Preparation

Ability to prepare a comprehensive program for an architectural project, including assessment of client and user needs, a critical review of appropriate precedents, an inventory of space and equipment requirements, an analysis of site conditions, a review of the relevant laws and standards and assessment of their implication for the project, and a definition of site selection and design assessment criteria

The student's ability to assemble a comprehensive program for an architecture project is developed in core design studios.

3.13.17. Site Conditions

Ability to respond to natural and built site characteristics in the development of a program and the design of a project

The ability to respond to site in the development of both program and design is developed in the core design studios, moving from landscape conditions to urban sites in the ARCH 502. Students learn methods for analyzing sites and the larger systems to which they belong as preparation for design projects. Technical aspects of site design are included in the technology courses

3.13.18. Structural Systems

Understanding of principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems

First-year students learn the principles of structural behavior in the required technology courses ARCH 535: Structures I and ARCH 536: Structures II Case studies of contemporary structural systems are analyzed in ARCH 631: Technology Case Studies. Structural concepts and paradigms are also discussed in the theory/history core courses. Opportunities for students to apply their understanding of structural design is provided in core design studio, ARCH 602.

3.13.19. Environmental Systems

Understanding of the basic principles and appropriate application and performance of environmental systems, including acoustical, lighting, and climate modification systems, and energy use, integrated with the building envelope

Understanding of environmental systems is acquired in the required technology courses ARCH 533 & 534: Environmental Systems I & II and is reinforced in the core design studio ARCH 601, Design Studio III. The integration of particular systems, including energy simulation and design, sustainability, and illumination, is incorporated into the Technology Case Studies, ARCH 631.

3.13.20. Life Safety

Understanding of the basic principles of life-safety systems with an emphasis on egress

Students develop an understanding of life-safety principles, requirements and systems in ARCH 532: Construction II as well as courses in environmental systems, structures and professional practice. This understanding is reinforced in the core design studios ARCH 601: Design Studio III. Further understanding and increased knowledge of building processes related to life-safety is gained through the comparison of projects in the required course ARCH 631: Technology Case Studies.

3.13.21. Building Envelope Systems

Understanding of the basic principles and appropriate application and performance of building envelope materials and assemblies

Basic design principles of building envelope systems are covered in all the required and designated technology courses including ARCH 531, 532, 534, 631, and 632. In addition, building envelope design is addressed in ARCH 601: Design Studio III.

3.13.22. Building Service Systems

Understanding of the basic principles and appropriate application and performance of plumbing, electrical, vertical transportation, communication, security, and fire protection systems

Basic principles of systems design are covered in core and designated technology courses including ARCH 531, 532, 533, 534, and 631, as well as integrative design studios, ARCH 602.

The ARCH 638: Designated Technical Electives have also been developed to provide instruction in a range of building service systems.

3.13.23. Building Systems Integration

Ability to assess, select, and conceptually integrate structural systems, building envelope systems, environmental systems, life-safety systems, and building service systems into building design

Basic design principles are covered in the core technology courses ARCH 531, 532, 533, 534, and 631, as well as integrative design studios, ARCH 602. In particular, ARCH 631: Technology Case Studies analyzes the integration of building systems in specific projects in order to better understand the relationship between architectural design and engineering systems. Core design studios, especially ARCH 602: Integrative Design, extend the understanding of buildings in terms of the integration of systems and develop students' ability to integrate systems in design projects.

The elective ARCH 732: Building Systems Integration allows students to extend their understanding in this area to a more advanced level.

3.13.24. Building Materials and Assemblies

Understanding of the basic principles and appropriate application and performance of construction materials, products, components, and assemblies, including their environmental impact and reuse

Students gain understanding of construction materials and their restrictions, standards, and assemblies through the required first-year courses ARCH 531 & 532: Construction I & II. This understanding is further developed and integrated in a synthetic way with other issues in the second year required course ARCH 631: Technology Case Studies I. Understanding of construction is also gained through progressive exposure to materials and methods of construction in the sequence of projects that constitute the core design studios.

3.13.25. Construction Cost Control

Understanding of the fundamentals of building cost, life-cycle cost, and construction estimating

Understanding of building economics and cost control is gained through technology courses in construction, environmental systems, and structures. The implications of methods of delivery (bid-building, GNP, design-build) on schedule, cost, and risk distribution are addressed in the required professional practice course, ARCH 772.

Students wishing a higher level of understanding in this regard may take elective course ARCH 762: Design and Development, ARCH 768: Real Estate Development, ARCH 765: Project Management, which cover development financing, construction cost control, and general building economics. The certificate program in Real Estate Development offers even more specialized courses in construction cost.

3.13.26. Technical Documentation

Ability to make technically precise drawings and write outline specifications for a proposed design

The ability to prepare technical documentation for a proposed design is introduced in the core courses in construction, structures, visual studies and ARCH 602: Integrative Design. A detailed understanding of technical documentation is developed through ARCH 631: Technology Case Studies.

3.13.27. Client Role in Architecture

Understanding of the responsibility of the architect to elicit, understand, and resolve the needs of the client, owner, and user

The role of the client is explicitly considered in ARCH 631: Case Studies and in two of the professional practice courses, ARCH 671 and ARCH 772. The first examines them through visits and workshops, while the second deals with the more formally expressed roles of architects and clients in contractual arrangements.

3.13.28. Comprehensive Design

Ability to produce a comprehensive architectural project based on a building program and site that includes development of programmed spaces demonstrating an understanding of structural and environmental systems, building envelope systems, life-safety provisions, wall sections and building assemblies and the principles of sustainability

Ability to produce a comprehensive design is developed in the core design studios and extended in ARCH 602: Design Studio IV, Integrative Design, where it is a common focus. An understanding of the requirements and techniques of comprehensive design is developed in courses in construction, environmental systems, structures and professional practice.

3.13.29. Architect's Administrative Roles

Understanding of obtaining commissions and negotiating contracts, managing personnel and selecting consultants, recommending project delivery methods, and forms of service contracts

Obtaining commissions, project delivery, service contracts, and types of documentation have all been addressed extensively in the ARCH 772: Professional Practice III.

Students interested in this area may gain a more advanced understanding in the elective course ARCH 765: Project Management.

3.13.30. Architectural Practice

Understanding of the basic principles and legal aspects of practice organization, financial management, business planning, time and project management, risk mitigation, and mediation and arbitration as well as an understanding of trends that affect practice, such as globalization, outsourcing,

project delivery, expanding practice settings, diversity, and others

Awareness of practice organization and management are central to the three courses in Professional Practice. ARCH 671 and ARCH 672 include visits to a range of architectural offices during which principals of these firms describe their organization and management procedures. Topics in contemporary practice, including office organization, financial management, professional contracts and negotiating, and the formation of design firms, are a primary focus of these courses, which canvasses different scales and types of firms. Financial planning is addressed in Arch 772: Professional Practice III.

3.13.31. Professional Development

Understanding of the role of internship in obtaining licensure and registration and the mutual rights and responsibilities of interns and employers

Students gain understanding about the responsibilities of interns to employers and vice-versa through ARCH 671: Professional Practice I and ARCH 672: Professional Practice II. In these courses, students learn about the role of internship by visiting a range of professional offices, reviewing their operations first hand, and discussing issues of practice with the principals of these firms, who are leading practitioners in the New York and Philadelphia area.

3.13.32. Leadership

Understanding of the need for architects to provide leadership in the building design and construction process and on issues of growth, development, and aesthetics in their communities

Awareness of the architect's leadership roles is developed throughout the technology sequence and explicltly in the professional practice sequence.

3.13.33. Legal Responsibilities

Understanding of the architect's responsibility as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, historic preservation laws, and accessibility laws

The legal context of architectural practice is explicitly addressed in ARCH 772: Professional Practice III. Students are introduced to the legal aspects surrounding the practice of architecture through ARCH 671 & 672: Professional Practice I & II. All of these courses examine the legal, ethical and professional conventions of architecture and are taught by faculty with experience in practice.

ARCH 765: Project Management provides an opportunity for advanced understanding in this area.

3.13.34. Ethics and Professional Judgment

Understanding of the ethical issues involved in the formation of professional judgment in architectural design and practice.

Awareness of professional ethics and judgment is developed through the core design studios and throughout the technology and professional practice courses.

PART FOUR – SUPPLEMENTAL INFORMATION

4.1 Student Progress Evaluation Procedure

Transfer Credit

The Department of Architecture does not give credit for academic courses taken outside the University of Pennsylvania. In the case that students entering the program have complete coursework elsewhere equivalent to required courses, they may apply to the individual professor to place out of that course, and upon approval must substitute other courses in the same area of interest.

Advanced Standing

Advanced Standing is determined during the admissions review. Eligible candidates may receive two semesters of advanced standing into our three-year professional Master of Architecture program, entering the program into the second, core-year of the program. Applicants for advanced standing must: (1) have a four-year degree from an accredited 4-plus-2 program; (2) have successfully completed courses equivalent to the first year of our M. Arch I Program; and (3) demonstrate abilities in architectural design that warrant advanced standing. Advanced Standing is determined on a school-by-school basis.

Students may also apply for advanced placement after their first or second semester of the Master of Architecture program. Upon review by faculty committee of students' previous transcript and performance while at the University of Pennsylvania, students may place out of an upper level semester of study-these students are required to complete all core studio semesters of work.

Standards for Evaluation, Advancement, Graduation, and Remediation

The Department of Architecture faculty applies a grading system of letter grades only: A, B, C, (each of these grades may be modified by a plus or minus sign) and F.If a student receives a grade of Fail (F) in a required course, the course must be repeated for credit. If a student receives a grade of Fail in an elective course, the course must be repeated or a course of equivalent course units meeting the degree requirements must be taken. Instructors must submit grades to the Registrar within 72 hours of the end of the examination period each semester. When faculty grades are not submitted by the deadline at the end of the semester, students will be given a grade of "F"; this will appear on the student's transcript until the grade is changed by the faculty member. A student who receives a grade of "F" in a course or a grade of "C" or lower in any two courses will be placed on academic probation by the Department for the following semester. In addition, the Department will maintain a written policy of a satisfactory level of academic performance. Upon receipt of the recommendation of the student's Chair, a student will be placed on academic probation for one semester for failure to maintain a satisfactory level of academic performance. If a student has not achieved a B average in any academic year, the department/program chair may ask the student to withdraw.

Receipt of a second "F" or failure to maintain a satisfactory level of academic performance while on academic probation may result in the student's dismissal from the School of Design. Once dismissed, the student must submit an application for readmission. Students are declared to be eligible to receive a degree by a vote of approval by the School of Design Executive Committee. To be eligible to receive a degree from the School of Design a student must have fulfilled all academic requirements for the degree, met all financial obligations, filed an application for the degree and been in attendance for a minimum of one academic year.

4.1.1 Student Course Evaluation Forms

Students have an opportunity to evaluate each course they take at the conclusion of the semester by filling out an online course evaluation form. The online version recently replaced a paper version used until 2009. Both versions can be seen below.

Results are available to individual faculty and to program administrators.

Sample
Course Evaluation Form

Please rate questions on a scale of: P=Poor, F=Fair, G=Good, VG=Very Good, E=Excellent.

Please leave the question blank if you lack information on a particular characteristic

	P	F	G	VG	E
[Instructor Name] - Overall quality of the instructor	○	○	○	○	○

	P	F	G	VG	E
Overall quality of the course.	○	○	○	○	○

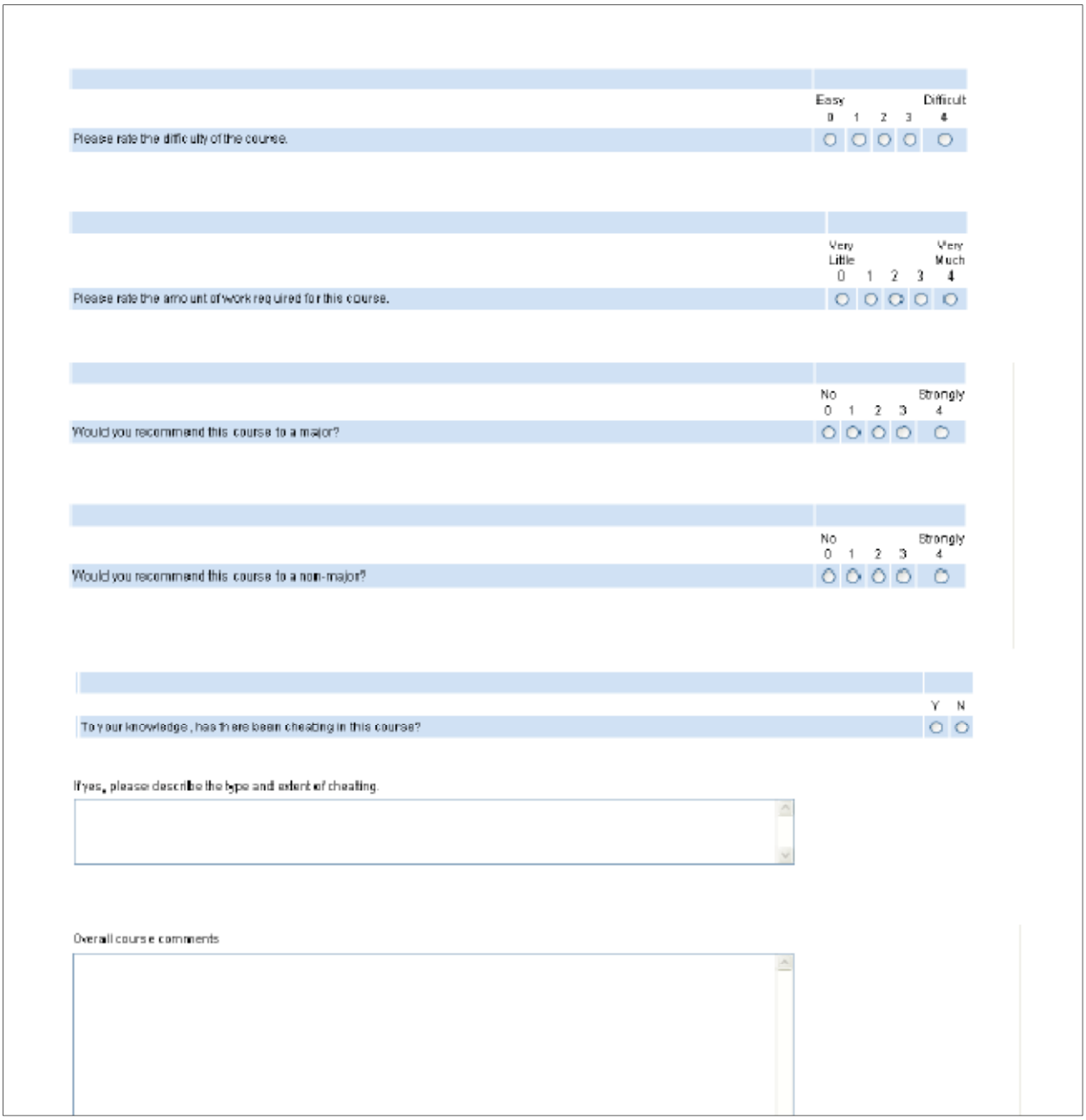
	P	F	G	VG	E
[Instructor Name] - Instructor's ability to communicate the subject matter.	○	○	○	○	○

	P	F	G	VG	E
[Instructor Name] - Instructor's ability to stimulate student interest	○	○	○	○	○

	P	F	G	VG	E
[Instructor Name] - Instructor 's accessibility and willingness to discuss course content and any problems.	○	○	○	○	○

	P	F	G	VG	E
Value of assigned readings.	○	○	○	○	○

	P	F	G	VG	E
Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.	○	○	○	○	○



	Easy 0	1	2	3	Difficult 4
Please rate the difficulty of the course.	○	○	○	○	○

	Very Little 0	1	2	3	Very Much 4
Please rate the amount of work required for this course.	○	○	○	○	○

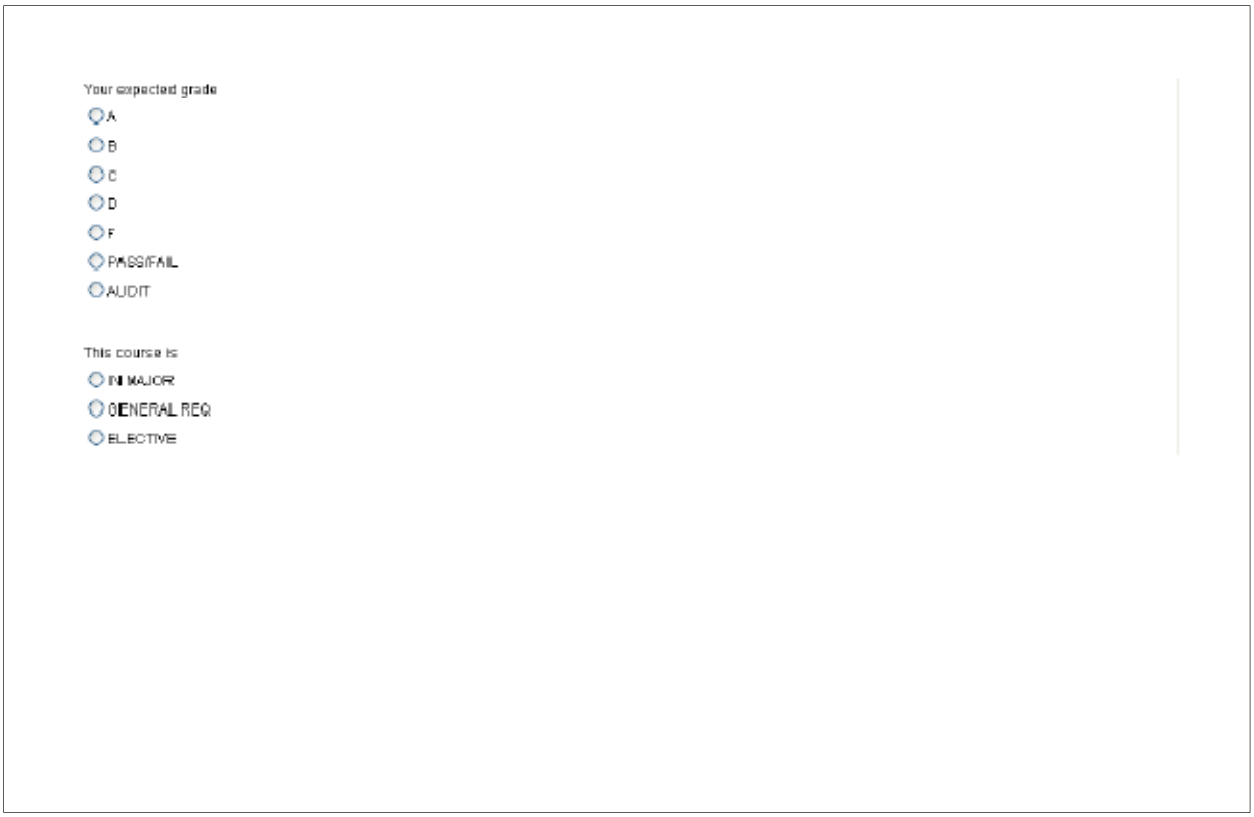
	No 0	1	2	3	Strongly 4
Would you recommend this course to a major?	○	○	○	○	○

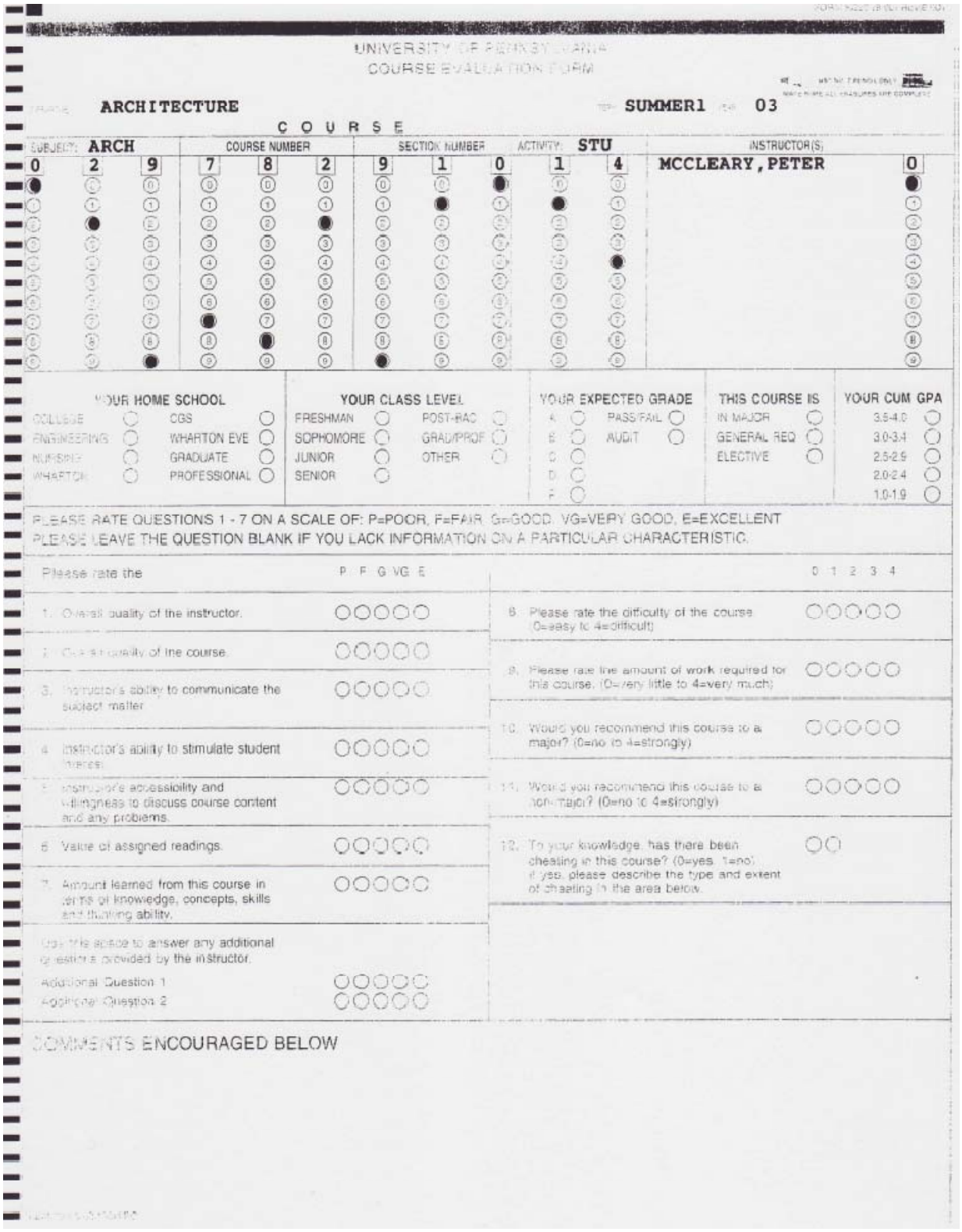
	No 0	1	2	3	Strongly 4
Would you recommend this course to a non-major?	○	○	○	○	○

	Y	N
To your knowledge, has there been cheating in this course?	○	○

If yes, please describe the type and extent of cheating.

Overall course comments


Your expected grade
A
B
C
D
F
PASS/FAIL
AUDIT
This course is:
IN MAJOR
GENERAL REQ
ELECTIVE



UNIVERSITY OF PENNSYLVANIA
COURSE EVALUATION FORM

NAME: **ARCHITECTURE** TERM: **SUMMER1** YR: **03**

COURSE

SUBJECT: ARCH	COURSE NUMBER	SECTION NUMBER	ACTIVITY: STU	INSTRUCTOR(S)
029	782	910	14	MCCLEARY,PETER 0

YOUR HOME SCHOOL
COLLEGE ○ CGS ○
ENGINEERING ○ WHARTON EVE ○
NURSING ○ GRADUATE ○
WHARTON ○ PROFESSIONAL ○

YOUR CLASS LEVEL
FRESHMAN ○ POST-BAC ○
SOPHOMORE ○ GRAD/PROF ○
JUNIOR ○ OTHER ○
SENIOR ○

YOUR EXPECTED GRADE
A ○ PASS/FAIL ○
B ○ AUDIT ○
C ○
D ○
F ○

THIS COURSE IS
IN MAJOR ○
GENERAL REQ ○
ELECTIVE ○

YOUR CUM GPA
3.5-4.0 ○
3.0-3.4 ○
2.5-2.9 ○
2.0-2.4 ○
1.0-1.9 ○

PLEASE RATE QUESTIONS 1 - 7 ON A SCALE OF: P=POOR, F=FAIR, G=GOOD, VG=VERY GOOD, E=EXCELLENT
PLEASE LEAVE THE QUESTION BLANK IF YOU LACK INFORMATION ON A PARTICULAR CHARACTERISTIC.

Please rate the	P F G VG E
1. Overall quality of the instructor.	○○○○○
2. Overall quality of the course.	○○○○○
3. Instructor's ability to communicate the subject matter.	○○○○○
4. Instructor's ability to stimulate student interest.	○○○○○
5. Instructor's accessibility and willingness to discuss course content and any problems.	○○○○○
6. Value of assigned readings.	○○○○○
7. Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.	○○○○○
Use this space to answer any additional questions provided by the instructor.	
Additional Question 1	○○○○○
Additional Question 2	○○○○○

	0 1 2 3 4
8. Please rate the difficulty of the course (0=easy to 4=difficult)	○○○○○
9. Please rate the amount of work required for this course. (0=very little to 4=very much)	○○○○○
10. Would you recommend this course to a major? (0=no to 4=strongly)	○○○○○
11. Would you recommend this course to a non-major? (0=no to 4=strongly)	○○○○○
12. To your knowledge, has there been cheating in this course? (0=yes, 1=no) If yes, please describe the type and extent of cheating in the area below.	○○

COMMENTS ENCOURAGED BELOW

4.2 Studio Culture Policy

The following studio culture policy was adopted by the faculty over the summer of 2009, and will be discussed and developed in meetings with the elected studio representatives and studio faculty.

Studio Culture Policy

The Penn department of architecture is committed to the design studio model. Design studios should provide a rigorous, collegial and supportive environment for faculty and students to develop expertise, think laterally, and experiment creatively. The goal of the design studio is to prepare graduates to be leaders in the profession and contribute to society and culture at the highest level. Design studios should provide a synthetic form of education, where project-based learning is the foundation for developing an understanding of and commitment to the highest values of the architectural profession.

To achieve the aims of the policy, the faculty and departmental administration should meet regularly during the school year with the student-elected design studio representatives. In particular, the newly elected studio representatives should review the studio culture policy and manual of studio practices at the beginning of each semester.

4.3 Course Descriptions

Fall 08					Spring 09				
Year 1: 500				CU					CU
ARCH 501	1	Design Studio I	Russo	2	ARCH 502	1	Design Studio II	Fierro	2
		Coord	Russo				Coord	Fierro	
	2	Design Studio I	Sabin	2		2	Design Studio II	Russo	2
	3	Design Studio I	Beckman	2		3	Design Studio II	Beckman	2
	4	Design Studio I	Snooks	2		4	Design Studio II	Hollwich	2
	5	Design Studio I	Krone	2		5	Design Studio II	Vandersys	2
ARCH 511		History and Theory I	Andy Payne	1	ARCH 512		History and Theory II	Leatherbarrow	1
ARCH 521	1	Visual Studies I		0.5	ARCH 522	1	Visual Studies II		0.5
		Coord	Veikos coord				Coord	Veikos coord	
	2	Visual Studies I		0.5		2	Visual Studies II		0.5
	3	Visual Studies I		0.5		3	Visual Studies II		0.5
	4	Visual Studies I		0.5		4	Visual Studies II		0.5
	5	Visual Studies I		0.5		5	Visual Studies II		0.5
ARCH 531		Construction I	Falck	0.5	ARCH 532		Construction II	Falck	0.5
ARCH 533		Environmental Systems I	Malkawi	0.5	ARCH 534		Environmental Systems II	Braham	0.5
ARCH 535		Structures I	Farley	0.5	ARCH 536		Structures II	Farley	0.5
Year 2: 600									
ARCH 601	1	Design Studio III	Veikos	2	ARCH 602	1	Design Studio IV	Kolatan	2
		Coord	Veikos				Coord	Kolatan	
	2	Design Studio III	Kolatan	2		2	Design Studio IV	Jamelle	2
	3	Design Studio III	Erdy	2		3	Design Studio IV	Phillips	2
	4	Design Studio III	Hoang	2		4	Design Studio IV	Rickenbacker	2
	5	Design Studio III	Furjan	2		5	Design Studio IV	Zucker	2
	6	Design Studio III	Manis	2					
ARCH 611		History and Theory III	Furjan	1	ARCH 632	1	Deployable Structures	Al Khayer	1
ARCH 621	1	Visual Studies III		0.5		2	Simulation and Design	Malkawi	1
		Coord	Veikos coord			3	Surface/Effects	Veikos	1
	2	Visual Studies III		0.5		4	Design for Light Structures	Morrison	1
	3	Visual Studies III		0.5		5	Design of Responsive Building E	Hoang	1
	4	Visual Studies III		0.5		6	Component-Based Design	Igou	1
	5	Visual Studies III		0.5	ARCH 638	1	Building Acoustics	Solway	0.5
	6	Visual Studies III		0.5		2	Building Skins	Cavallero	0.5
ARCH 631		Technology Case Studies	Falck	1		3	Building Systems	Mardeusz	0.5
ARCH 671		Professional Practice I	Gardner	0.5		4	Daylighting	Phinyawatana	0.5
						5	Lighting	Bernecker	0.5
					ARCH 672		Professional Practice II	Capaldi	0.5
Year 3:700									
ARCH 701	1	Design Studio V	Farjadi	2	ARCH 704	1	Advanced Design Studio	Rahim	2
	2	Design Studio V	McCleary	2		2	Advanced Design Studio	Weiss	2
	3	Design Studio V	Norten	2		3	Advanced Design Studio	Kieran-Timberlake	2
	4	Design Studio V	Hollwich	2		4	Advanced Design Studio	Farjadi	2
	5	Design Studio V	Rahim	2		5	Advanced Design Studio	Balmond-Snooks	2
	6	Design Studio V	TBD	2		6	Advanced Design Studio	Behnisch-Hass	2
ARCH 703	1	Post-Professional	Dubbeldam	2		7	Advanced Design Studio	Ruy	2
	2	Post-Professional	Ruy	2	ARCH 706	1	Thesis	Fierro+	2
					ARCH 772	1	Professional Practice III	McHenry	1
ARCH 698		AA elective		1	ARCH 712	1	Materials and Structures	DeLanda	1
ARCH 711	1	Tourism	Castillo	1	ARCH 712	2	Architectural Representation	Vesely	1
ARCH 711	2				ARCH 712	3	Spectacle/Post Spectacle	Furjan	1
ARCH 711	401	*Cultural Ecology*	Leatherbarrow/We	1	ARCH 712	4	Transforming the Nursing Home	Hollwich	1
ARCH 713	1	Ecology Technology	Pratt	1	ARCH 712	5	Architecture at the Scale of Geo	Jovanovich Weiss	1
ARCH 715		Writing on Architecture	Rybczynski	1	ARCH 712	6	Network Culture. The History of	Varnelis	1
ARCH 717		Urban dynamics	DeLanda	1	ARCH 712	7	Designing Asia	Ashraf	1
ARCH 727		Industrial Design I	Bresser	1	ARCH 722		Advanced Drawing	Russo	1
ARCH 731		Experiments in Structures	Al Khayer/McLeary	1	ARCH 726		Furniture Design	Mueller-Russo	1
ARCH 732		Building Systems	Malkawi	1	ARCH 728		Design Contemp. Products	Owens	1
ARCH 739		Building Pathology	Henry	1	ARCH 734		Ecological Architecture	Martin	1
ARCH 741		Arch. Design Innovation	Rahim	1	ARCH 741		Experiments in Design	Sabin	1
ARCH 743		Form & Algorithm	Balmond/Snooks	1	ARCH 744	1	Digital Fabrication	Kolatan	1
ARCH 745		Non_linear biosynthesis	Sabin-Jones	1	ARCH 744	2	Digital Fabrication	Ruy	1
ARCH 765		Project Management	Arena	1	ARCH 752		Case Studies Urban Design	Larice	1
ARCH 768	2	Real Estate Development	Weller	1	ARCH 762		Design and Development	Rybczynski	1
ARCH 780		Arch in Schools	Braham	0.5	ARCH 768	1	Real Estate Development	Nakahara	1
					ARCH 780		Arch in Schools	Braham	0.5

Course Number: ARCH 501-201/202/203/204/205 Course Title: Design Studio I

Total Credits Awarded:	2 Course Units
Course Description:	The design studio will provide the framework to learn essential techniques in delineating spaces as well as important strategies in critical and analytical thinking.
Course Goals & Objectives:	The studio objectives will focus on implementing both 2D (plan and section) and 3D (physical and digital) techniques in the design process-- as well as the translations required between these techniques. Model making, 2D software (AutoCad, Photoshop, and Illustrator) and 3D software (Rhino 4.0) will be essential skills. In addition, the use of the laser cutter will be required. Critical and analytical thinking processes will be essential in order to engage in a self-evaluative and iterative design process.
Student Performance Criterion:	**Fulfill** 3 Graphics Skills 5 Formal Ordering Systems 6 Fundamental Design Skills 12 Human Behavior 16 Program Preparation 17 Site Conditions **Partially Fulfill** 1 Speaking and Writing Skills 2 Critical Thinking Skills 7 Collaborative Skills 14 Accessibility 18 Structural Systems 21 Building Envelope Systems 24 Building Materials 27 Client Role in Architecture 34 Ethics & Professional Judgment
Topical Outline:	Project 01; 2 weeks (20%); Project 02; 5 weeks (25%); Project 03; 6 weeks (50%); Final Submission to Archive (5%)
Prerequisites:	None
Textbooks / Learning Resources:	Reading list, thematic lectures by instructors
Dates Offered:	Every Fall
Faculty Assigned:	Fall 2007: Coordinator/Instructor: Rhett Russo Studio Instructor: Julie Beckman, Srdjan Jovanovic Weiss, Alex Pincus, Jenny Sabin Fall 2008: Coordinator/Instructor: Rhett Russo Studio Instructor: Julie Beckman, Jenny Sabin, Roland Snooks, Ben Krone

Course Number: ARCH 502-201/202/203/204/205 Course Title: Design Studio II

Total Credits Awarded: 2 Course Units

Course Description: This studio explores architecture as it relates to and is developed from contemporary urban conditions. This includes basic lessons in urban morphologies and vernacular architecture, as well as dynamic conditions of environment, traffic, infrastructure, and development. The final project is a building with heavy emphasis on site relationships.

Course Goals & Objectives:
- To introduce complex conditions of site as generators for architectural organization and form.
- To study a variety of urban issues that affect architecture, particularly issues current in Philadelphia.
- To research significant attributes and histories of a local and expanded site.
- To develop the ability to organize and structure a complex program on a site.
- To develop a building to a high level of resolution with respect to local and expanded site relationships and to a medium scale of detail and material.

Student Performance Criterion:

Fulfill	Partially Fulfill
2 Critical Thinking Skills	1 Speaking and Writing Skills
3 Graphics Skills	14 Accessibility
4 Research Skills	15 Sustainable Design
5 Formal Ordering Systems	18 Structural Systems
6 Fundamental Design Skills	21 Building Envelope Systems
10 National & Regional Traditions	23 Building System Integration
11 Use of Precedents	24 Building Materials
12 Human Behavior	27 Client Role in Architecture
13 Human Diversity	34 Ethics & Professional Judgment
16 Program Preparation	
17 Site Conditions	

Topical Outline:
Urban analysis: 5 weeks (40%)
Small-scale Building component set in context: 2 weeks (20%)
Overall Building Design: 6 weeks (40%)

Prerequisites: ARCH 501

Textbooks / Learning Resources:
Historical Maps / Civil Drawings
Various reading selections pertinent to that year's selected site & program

Dates Offered: Every Spring

Faculty Assigned:
Spring 2008: Coordinator/Instructor: Annette Fierro
Studio Instructor: Julie Beckman, Srdjan Jovanovic Weiss, Rhett Russo, Guy Zucker
Spring 2009: Coordinator/Instructor: Annette Fierro
Studio Instructor: Julie Beckman, Brian Hollwich, Keith Van Der Sys, Rhett Russo

Course Number: ARCH 511-001 Course Title: History and Theory I
Course Number: ARCH 511-201 Course Title: History and Theory Recitation

Total Credits Awarded: 1 Course Units

Course Description: The course explores fundamental ideas and models of architecture that have emerged c hundred years, with specific focus on constructive and generative models.
Weekly 2 hour Lecture, with weekly 2 hour tutorial session.

Course Goals & Objectives: Students should acquire skill in interpreting buildings in relation to the circumstances immediate to their construction (technological, political-economic, and social-cultural) and in view of the durable problems and issues that have emerged from architectural traditions. Abilities are demonstrated through participation and presentation in seminar sessions, and through the submission of written, drawn, and built exercises.

Student Performance Criterion:

Fulfill	Partially Fulfill
1 Speaking and Writing Skills	9 Non-Western Traditions
2 Critical Thinking Skills	10 National and Regional Traditions
4 Research Skills	12 Human Behavior
5 Formal Ordering Systems	13 Human Diversity
8 Western Traditions	34 Ethics & Professional Judgment
11 Use of Precedents	

Topical Outline: Topics: Modernity & Modernism(s), Constructive Systems, Geometry & Matter, Function as Generator, Spatial Models, Constructivism, Bioconstructivism, Emergent Structure, Organic Form & Form-Finding, Patterns, Systems & Zones of Ambience, Modernity after Modernism
Assignment 1 "Modern Architecture" 10%
Assignment 2 Research dossier 10%
Assignment 3 Final group model 50%
Assignment 4 Final Research documents 20%
Participation in Tutorials 10%

Prerequisites: Architectural History, Ancient to Modern

Textbooks / Learning Resources: Articles available through Blackboard
Three TAs (PhD students) conduct 2 hr tutorial seminars, review readings and assignments

Dates Offered: Every Fall

Faculty Assigned: Fall 2008: Andrew Payne Fall 2007: Detlef Mertins
Recitation sections taught by PhD students

Course Number: ARCH 512-001 Course Title: History and Theory II
Course Number: ARCH 512-201/202/203/204/205 Course Title: Recitation

Total Credits Awarded: 1 Course Units

Course Description: This course concerns the role that architecture plays in the accommodation, articulation, and renewal of public culture. Its lectures on urban architecture and city districts follow a historical path, beginning in the 14th and ending in the 20th century, with examples from Europe, North, and South America.

Course Goals & Objectives:
- Introduce the history of urban architecture from the time of the renaissance to the present
- Introduce concepts of urban order and the role of architecture in its development
- Introduce concepts and the history of the various forms of public life
- Introduce and distinguish the types of urban architecture
- Develop the capacity to interpret, analyze, and shown contemporary relevance of historical material
- Develop abilities and critical thinking and writing
- develop the capacity to interpret, analyze, and shown contemporary relevance of historical material (recitation)
- develop abilities and critical thinking and writing (recitation)

Student Performance Criterion:

Fulfill	Partially Fulfill
1 Speaking and Writing Skills	5 Formal Ordering Systems
2 Critical Thinking Skills	12 Human Behavior
4 Research Skills	17 Site Conditions
8 Western Traditions	34 Ethics and Professional Judgment
9 Non-Western Traditions	
10 National and Regional Traditions	
11 Use of Precedents	
13 Human Diversity	

Topical Outline:
Theory of urban architecture: 25 %
- theory of public culture/public life
- theory of place/space
- theory of topography/urban order

History of urban architecture: 75 %
- types (campo, villa, theater, theater, *quartier*, *passage*, *cabaret*, plaza, park, ruin)
- forms of social and public life

Prerequisites: ARCH 511

Textbooks / Learning Resources: 3 to 5 book chapters or essays per week, listed on the course syllabus, a few from the professor but most from architects, theorists, historians, and philosophers whose scholarship addresses primary topics in architectural history and theory, particularly that of urban architecture.

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: David Leatherbarrow
Recitation sections taught by PhD students
Spring 2009: Jenny Ko, Andrew Tripp, John Sands, Steven Anderson

Course Number: ARCH 521-101/102/103/104/105/106 Course Title: Visual Studies I

Total Credits Awarded:	0.5 Course Units
Course Description:	The course emphasizes spatial inquiry and visual communication through constructions with line and surface and projective drawing using digital media techniques and methodologies.
Course Goals & Objectives:	To enhance visual thinking and teach fundamental graphic skills for architectural representation. Produce clear and well-crafted drawings that demonstrate skill in composition and rendering, use of color, tone, and an understanding of the conventions of lineweight, linetype and notation.
Student Performance Criterion:	**Fulfill** 3 Graphics Skills 5 Formal Ordering Systems 26 Technical Documentation **Partially Fulfill** 6 Fundamental Design Skills
Topical Outline:	3 One-week exercises 90% Final Submission for archive 10%
Prerequisites:	None
Textbooks / Learning Resources:	1. *Visual Studies Primer*, eds. Jackie Wong and Todd Shapiro 2. Visual resource of exemplary drawings 3. Lectures and demonstrations 4. Please see syllabus for complete bibliography
Dates Offered:	Every Fall
Faculty Assigned:	Fall 2008: Coordinator: Cathrine Veikos Instructors: Jason Easter, Todd Shapiro, Andrew Lucia, Jackie Wong, Ximena Valle Fall 2009: Coordinator: Simon Kim Instructors: Jason Easter, Nadine Kashlan, Jackie Wong, Lasha Brown

Course Number: ARCH 522-101/202/203/204/205 Course Title: Visual Studies II

Total Credits Awarded: 0.5 Course Units

Course Description: Develops skills and practices of drawing that are required to manifest complex spatial, temporal and quantitative information in two-dimensions and to index architectural relationships of space and time.

Course Goals & Objectives: Provide skills for the successful communication of architectural ideas and intentions. Support visual thinking, the evolution of design strategies and design feedback for the critical evaluation of architecture's agency in the complex systems and networks related to the urban context.

Student Performance Criterion:

Fulfill	Partially Fulfill
3 Graphics Skills	6 Fundamental Design Skills
4 Research Skills	
5 Formal Ordering Systems	
26 Fundamental Design Skills	

Topical Outline:
Information Graphics (One-week exercise)
Dynamic Analysis: Site & Program (One week workshop integrated with Studio)
Measured/Rendered Drawings (One-week Exercise)

Prerequisites: ARCH 521

Textbooks / Learning Resources:
1. *Visual Studies Primer*, eds. Jackie Wong and Todd Shapiro
2. Visual resource of exemplary drawings
3. Lectures and demonstrations
4. Recommended readings, especially:

Tufte, R. Edward. *Visual Display of Quantitative Information.* Cheshire, CT: Graphics Press, 1983.
Tufte, R. Edward. *Envisioning Information*. Cheshire, CT: Graphics Press, 1991.

Dates Offered: Every Spring

Faculty Assigned:
Spring 2008: Coordinator: Cathrine Veikos
Instructors: Matthew Conti, Gavin Riggall, George Ristow, Adrienne Yancone, Cathrine Veikos
Spring 2009: Coordinator: Cathrine Veikos
Instructors: Instructors: Angie Co, Jason Easter, Andrew Lucia, Todd Shapiro, Ximena Valle

Course Number: ARCH 531-401 Course Title: Construction I

Total Credits Awarded: 0.5 Course Units

Course Description: A course on the basic principles and concepts of architectural construction technology and the interrelated nature of structure, construction and environmental systems. Focused mainly on bearing up wall masonry and heavy and light wood frame construction.

Course Goals & Objectives: Design of construction systems for small scale load bearing masonry and timber frame structures, including all secondary and service elements and performance criteria.

Student Performance Criterion:

Fulfill	Partially Fulfill
15 Sustainable Design	9 Non-Western Traditions
17 Site Conditions	14 Accessibility
20 Life Safety	18 Structural Systems
21 Building Envelop Systems	19 Environmental Systems
24 Building materials and Assemblies	22 Building Service Systems
25 Construction Cost Control	33 Legal Responsibilities
26 Technical Documentation	34 Ethics and Professional Judgment

Topical Outline:
Introduction / Overview 10%
bearing Wall Building elements 50%
Wood Frame Construction 20%
Sustainability 10%
Building Codes & Performance 10%

Prerequisites: None

Textbooks / Learning Resources: *Fundamentals of Building Construction*, fifth edition by Edward Allen & Joseph Iano, Wylie Publisher, New York
Other selected readings and comprehensive study notes, diagrams, images

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Lindsay Falck

Course Number: ARCH 532-401 Course Title: Construction II

Total Credits Awarded: 0.5 Course Units

Course Description: A continuation of Construction I, focusing on light and heavy steel frame construction, concrete construction, light and heavyweight cladding systems and systems building.

Course Goals & Objectives: Design of construction systems for large-scale framed structures with deep basements and foundations, complex high efficiency cladding systems and environmental controls with focus on sustainable design principle.

Student Performance Criterion:

Fulfill	Partially Fulfill
15 Sustainable Design	14 Accessibility
17 Site Conditions	18 Structural Systems
20 Life Safety	19 Environmental Systems
21 Building Envelop Systems	22 Building Service Systems
24 Building materials and Assemblies	33 Legal Responsibilities
25 Construction Cost Control	34 Ethics and Professional Judgment
26 Technical Documentation	

Topical Outline:
Site Investigations 10%
Deep Foundations & Basements 10%
Concrete & Concrete Frame 15%
Steel and Steel Frame 15%
Cladding Systems 20%
Environmental Controls 15%
Systems Integration 5%
Building Codes 10%

Prerequisites: ARCH 531

Textbooks / Learning Resources: *Fundamentals of Building Construction, fifth edition,* by Edward Allen and Joseph Iano, Wylie Publisher, New York
Various texts, notes, etc

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: Lindsay Falck

Course Number: ARCH 533-401 Course Title: Environmental Systems I

Total Credits Awarded: 0.5 Course Units

Course Description: This course is the first of a two-term sequence in Building Technology (Arch 533, 534) and constitutes part of the core curriculum in architecture.The course introduces the differnet aspects of the physical environment which directly affect people and their buildings, such as climate, weather, solar radiation and heat gain and loss.

Course Goals & Objectives: Study the means by which environmental factors may be wisely utilized, controlled and modified as an integral part of the architectural design.

Student Performance Criterion:

Fulfill	Partially Fulfill
15 Sustainable Design	12 Human Behavior
17 Site Conditions	20 Life Safety Systems
19 Environmental Systems	21 Building Envelope Systems
22 Building Service Systems	22 Building Material and Assemblies

Topical Outline:

Environmental Factors (60%)
Comfort Conditions, Psychrometrics
Psychrometrics and Bioclimatic Chart
Wind and Natural Ventilation, Intro to Solar Geometry
Solar Geometry and Solar Angles
Shading of Buildings

Thermodynamic of Buildings (40%)
Heat Transfer and Thermal Flux
Heat Transmission Coef., Composted U-values for materials
Intro to Energy Consumption Predictions
Heat Loss, Heat Gain Calculation: walls and roof, Intro. To computer applications
Heat Gain Calculations: Glazing and Internal Sources, Application of Thermal Technologies in Design

Prerequisites: None

Textbooks / Learning Resources: Required Book: Vaughn Bradshaw, Building Control Systems, 3nd Edition, John Wiley and Sons, New York, 2006.
Additional readings and all lectures are placed on the course web (blackboard - www.courseweb.uipenn.edu)

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Ali Malkawi

Course Number: ARCH 534-401 Course Title: Environmental Systems II

Total Credits Awarded: 0.5 Course Units

Course Description: Introduce the environmental systems of larger, more of larger, more complex buildings, with an emphasis on the relation between performance and design.

Course Goals & Objectives: Introduce basic concepts and analytical techniques for understanding heating, cooling, air conditioning, lighting, and acoustical systems in buildings.

Student Performance Criterion:

Fulfill	Partially Fulfill
15 Sustainable Design	12 Human Behavior
19 Environmental Systems	20 Life-Safety Systems
22 Building Service Systems	21 Building Envelope Systems
23 Building Systems Integration	24 Building Materials and Assemblies

Topical Outline:

Environment and HVAC (75%)
- Air Conditioning
- Big & Bulky: Shape & Performance
- HVAC Systems I
- HVAC Systems II
- Meyerson HVAC
- HVAC: Air Handling
- Big and Bulky Buildings
- Environmental Performance

Daylighting and Lighting (20%)
- Dialing & Daylighting
- Illumination: Analysis
- Lutron Field Trip: Automation and Control
- Ilumination: Production, Direction, and Control

Acoustics (5%)

Prerequisites: Arch 533, or equivalent

Textbooks / Learning Resources: The primary text: *Mechanical and Electrical Equipment for Buildings*, 10th ed. (2005) by Stein, Reynolds, and Kwok.
Additional readings and light meters will be placed on reserve in the Fischer Finer Arts Library. Copies of all course documents and materials are located in a School of Design course folder on \\juno\, available from any networked computer or via the web (see resources at www.design.upenn.edu/comp).

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: William Braham

Course Number: ARCH 535-401 Course Title: Structures I
Course Number: ARCH 535-402 Course Title: Structures I Lab

Total Credits Awarded: 0.5 Course Units

Course Description: Structures I covers skeletal elements and their assembly into building structural systems, concentrating on the design principles and structural behavior. The analysis and design of beams and columns, trusses and frames are covered, as well as an investigation of the properties of structural materials. Site visits to building sites and fabrication shops demonstrate the means and methods of construction reflected in the course.

Course Goals & Objectives:
1. Develop an understanding and intuition of structural behavior.
2. Develop an understanding of structural materials and their relationship to the building process.
3. Explore the relationship between architecture and structure.
4. Examine forms which are architecturally and structurally well-integrated.

Student Performance Criterion:

Fulfills

18 Structural Systems
21 Building envelop systems
23 Building systems integration
24 Building Material and Assemblies
28 Comprehensive Design

Topical Outline: Structure Systems / Force Loads, Stress / Materials, Trusses, Beam Analysis, Column Analysis / Design, Structural Joints, Rigid Frame / Braced Frame, Framing Systems / Lateral Loads, Tall Building Frames, Composite Systems, Structural Form

Prerequisites: None

Textbooks / Learning Resources: Course compendium, recommended text reference Structures (6th Edition) by Daniel Schodek, Prentice Hall, field trips to construction sites and fabrication shops and two TA's who conduct workshop reviews and individual tutoring.

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Richard Farley

Course Number: ARCH 536-401 Course Title: Structures II
Course Number: ARCH 536-401 Course Title: Structures II Lab

Total Credits Awarded:	0.5 Course Units
Course Description:	Structures II covers structural elements and their assembly into building structural systems, concentrating on design principles and structural behavior. The analysis and design of two dimensional elements (flat and curved) and foundation systems are covered, as well as selected topics such as dynamics and composite elements. The course focuses on observing structural behavior and experiencing structural behavior, as well as, the influence of the construction process on the design of structures.
Course Goals & Objectives:	1. Develop an understanding and intuition of structural behavior. 2. Develop an understanding of structural materials and their relationship to the building process. 3. Explore the relationship between architecture and structure. 4. Examine forms that are architecturally and structurally well-integrated.
Student Performance Criterion:	Fulfills 18 Structural Systems 21 Building envelop systems 23 Building systems integration 24 Building Material and Assemblies 28 Comprehensive Design
Topical Outline:	Structural Systems / 2-D Structures, Floor Systems, Slabs / Plates, Slab sizing, Openings in Walls, Walls, Space Frames, Curvature / Surface Structures, Composite / Hybrid Systems, Foundations, Dynamics, Historic Preservation, Future Technology
Prerequisites:	ARCH 535-401
Textbooks / Learning Resources:	Course compendium, recommended text reference Structures (6th Edition) by Daniel Schodek, Prentice Hall, field trips to construction sites and fabrication shops and two TA's who conduct workshop reviews and individual tutoring.
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008 & 2009: Richard Farley

Course Number: ARCH 601-201/202/203/204/205/206 Course Title: Design Studio III

Total Credits Awarded: 2 Course Units

Course Description: Intermediate design project engages technology, ecology and urban dwelling. Design of large ubran dwelling addresses complex programming issues and selected ecological and technological dimensions of the project.

Course Goals & Objectives: Integrate considerations of energy and resource use into a design methodology and study the effects of environmental conditions on design. Extend design skills to address: building massing, scale and orientation, program organization, circulation and egress, accessibility, building systems and materials. Resolve circulation and programmatic adjacencies, articulate building structure, interior organization and the material assembly of the building enclosure.

Student Performance Criterion:

Fulfills	Partially Fulfills
2 Critical Thinking Skills	1 Speaking & Writing Skills
3 Graphics Skills	13 Human Diversity
4 Research Skills	18 Structural Systems
5 Formal Ordering Systems	22 Building Service Systems
6 Fundamental Design Skills	23 Building Systems Integration
10 National & Regional Traditions	34 Ethics and Professional Judgment
11 Use of Precedents	
12 Human Behavior	
14 Accessibility	
15 Sustainable Design	
16 Program Preparation	
17 Site Conditions	
20 Life Safety	
21 Building Envelope Systems	
24 Building Materials	

Topical Outline:
Preliminary Analyses 1, 2 weeks
Design Research and Development, 5, 6 weeks
Project Design, 6 weeks
Final Submission Preparation 1 week

Prerequisites: ARCH 502 & ARCH 522 or advanced placement

Textbooks / Learning Resources: Ching, Francis D K, D., Winkel Faia, Pe, Steven R. *Building Codes Illustrated: A Guide to Understanding the 2006 International Building Code.* Hoboken, N.J. : Wiley, c2007.
In addition, each studio section provides selected materials. Please see syllabi for complete bibliography.

Dates Offered: Every Fall

Faculty Assigned:
Fall 2007: Coordinator: Detlef Mertins
Studio Instructors: Ferda Kolatan, Scott Erdy, Phu Hoang, Annette Fierro, Laura Crahan, Gisela Baurmann
Fall 2008: Coordinator/Instructor: Cathrine Veikos
Studio Instructors: Ferda Kolatan, Scott Erdy, Phu Hoang, Helene Furjan, Tina Manis

Course Number: ARCH 602-201/202/203/204/205/206 Course Title: Design Studio IV

Total Credits Awarded:	2 Course Units
Course Description:	This course explores new technologies, materials and construction techniques with an emphasis on building integration. Professional consultants are invited to assist this comprehensive desgin project.
Course Goals & Objectives:	1. Research of new building technologies/fabrication methods 2. Application of advanced software (parametric, BIM, simulation) 3. Investigation of structural systems 4. Study of building systems 5. Material investigations 6. Development of a comprehensive project with emphasis on building integration
Student Performance Criterion:	**Fulfills** 2 Critical Thinking Skills 3 Graphics Skills 4 Research Skills 5 Formal Ordering Systems 6 Fundamental Design Skills 7 Collaborative Skills 16 Program Preparation 17 Site Conditions 18 Structural Systems 19 Environmental Systems 21 Building Envelope Systems 22 Building Service Systems 23 Building Systems Integration 24 Building Materials 26 Technical Documentation 28 Comprehensive Design **Partially Fulfills** 1 Speaking & Writing Skills 11 Use of Precedents 12 Human Behavior 14 Accessibility 15 Sustainable Design 20 Life Safety 34 Ethics and Professional Judgment
Topical Outline:	- Research of new building technologies/fabrication methods (5%) - Application parametric software, BIM (10%) - Investigation of structural systems/structural simulation (15%) - Study of building systems/energy simulation (10%) - Material investigations/consultancy (10%) - Project development with emphasis on building integration (50%)
Prerequisites:	ARCH 502 & ARCH 522 or advanced placement
Textbooks / Learning Resources:	Working with professional consultants
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008: Coordinator: Ferda Kolatan Studio Instructors: William Braham, David Ruy, Hina Jamelle, Brian Phillips, Shawn Rickenbacker Spring 2009: Coordinator: Ferda Kolatan Studio Instructors: Guy Zucker, Hina Jamelle, Brian Phillips, Shawn Rickenbacker

Course Number: ARCH 602-207 Course Title: Simulation Workshops

Total Credits Awarded:	0 Course Units
Course Description:	Workshops are intended to provide students with general knowledge and basic skill to utilize building simulation tools to the design process. Workshops are divided into two areas: Structural performance simulation and environmental simulation.
Course Goals & Objectives:	- Introduction of recent advancement in computerized building simulations that allow applying tools in an early design stage to increase the performance of its design. - Workshops provide students with basic principles of building simulation. - Hands-on experience using building simulation tools and applicability of simulation tools to design process. - Help Students chose the proper structural system during early design stages.
Student Performance Criterion:	Partially Fulfill 18 Structural Systems 19 Environmental Systems 21 Building Envelope Systems 23 Building Materials and Assemblies 28 Comprehensive Design
Topical Outline:	Building structural system assessment 20% Structural performance Simulation 30% Sunpath and shadow - 15% Solar intensity and Lightlevel - 15% Indoor natural airflow - 20%
Prerequisites:	ARCH 535 Structures, CAD software
Textbooks / Learning Resources:	Building simulation domains: Visual Structural Analysis, Ecotect, Radiance, Flovent CAD: Rhinoceros or Autocad
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008: Mohamad Al Khayer Spring 2009: Mohamad Al Khayer & Yun Kyu Yi

Course Number: ARCH 611-001 Course Title: History and Theory III
Course Number: ARCH 611 201 Course Title: Recitation

Total Credits Awarded: 1 Course Units

Course Description: Weekly lecture course with recitations examines selected topics, figures, projects, and theories within contemporary architecture, the history and theory of architecture, and related design fields.

Course Goals & Objectives: Organized thematically, the course aims to map and interrogate the range of current disciplinary positions (as theories and practices); the questions, conflicts, inter-relations, and transitions they generate; their techno-social implications and bases; and the genealogies and histories from which they develop or to which they speak.

The course aims to develop tools and techniques instrumental in the construction of research and argumentation: the development of areas of investigation, bibliography and resource preparation, the formation of manifestos or theses, and research methodologies and techniques. A central goal of this course is to encourage the use of rigorous research in the design process by demonstrating the ways in which a variety of relationships between design and *ideas* operate, and have operated, within the discipline.

Student Performance Criterion:

Fulfills	Partially Fulfills
1 Speaking and Writing Skills	5 Formal Ordering Systems
2 Critical Thinking Skills	11 Use of Precedents
4 Research Skills	12 Human Behavior
7 Collaborative Skills	13 Human Diversity
8 Western Traditions	17 Site Conditions
10 National & Regional Traditions	30 Architectural Practice
	32 Leadership

Topical Outline:
Week 1: Shaping Things (contemporary//design, or *Histories of the Immediate Present)*
Week 2: From Object to Field (landscape vs architecture)
Week 3: Urban Futures of the Recent Past (mats, matrices, megastructures & utopias)
Week 4: Effects: Radiant Synthetic (mood, atmosphere, sensation, distraction)
Week 5: Junk Space (non-places, supermodernity, and organizational space)
Week 6: Learning From Las Vegas (image, pop, and branding)
Week 7: Delirious New York (hybrids, difference, desire and identity)
Week 8: Folds, Bodies and Blobs (abstraction, animation, and plasticity)
Week 9: The Type and its Transformations (types, texts, and diagrams)
Week 10: Mechanization Takes Command (industrialization, technology and fabrication)
Week 11: Notes On The Synthesis Of Form (systems, cybernetics and control)
Week 12: The Metropolis and Mental Life (subjects, identity and behavior)

Prerequisites: ARCH 511, ARCH 512

Textbooks / Learning Resources: Reading List, Recitations, Guest lectures. (Readings for the course are intended to extend the range and scope of material covered, to expose students to the debates and issues of more advanced history and theory, and to serve as a base for assignments.)

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Helene Furjan (2008 completed by Nadir Lahiji)
Recitation sections taught by PhD students

Course Number: ARCH 621-101 Course Title: Visual Studies III

Total Credits Awarded:	0.5 Course Units
Course Description:	Advances the use of digital media to introduce new technical skills and to develop methodologies for the production of accurate, expressive and communicative drawings.
Course Goals & Objectives:	Explore the potential of drawings as dynamic visual repositories of data from which information can be gleaned, design geometries generated, tested and refined. Engage the design process with the representation of dynamic information, including conceptual trajectories engaged by the ecological systems of the project, programmatic relations and spatial dynamics. Achieve an effective visual presentation of the final design proposal and successfully manage of physical output with in-depth attention to workflow and data transfer across multiple softwares.

Student Performance Criterion:	Fulfill	Partially Fulfill
	3 Graphics Skills	6 Fundamental Design Skills
	5 Formal Ordering Systems	26 Technical Documentation

Topical Outline:

Four two-day intensive workshops:

1. Project morphology
2. Ecological Approach to the Design Process
3. Project organization
4. Visual communication – Final Presentation

Prerequisites: ARCH 522 or advanced standing

Textbooks / Learning Resources: Visual resource of exemplary drawings
Lectures and demonstrations
Please see syllabus for complete bibliography

Dates Offered: Every Fall

Faculty Assigned:

Fall 2008: Coordinator: Cathrine Veikos
Studio Instructors: Andrew Ruggles, James Kerestes, Megan Born, Adrienne Yancone, Patrick Stinger, Paul Coughlin
Fall 2009: Coordinator: Cathrine Veikos
Studio Instructors: Andrew Lucia, Chris Mackowiak, Deborah Greenberg Katz, Joshua Freese, Ben Muller

Course Number: ARCH 631-001 Course Title: Technology Case Studies I

Total Credits Awarded: 1 Course Units

Course Description: A holistic in depth study of significant recent buildings, their processes of procurement, construction and performance criteria.

Course Goals & Objectives: To expose students to the total process of the design and construction of large scale, complex buildings, their performance _ for structural and envelope elements their energy and service elements, environmental controls and aspects of sustainability.

Student Performance Criterion:

Fulfill	Partially Fulfill
1 Speaking and Writing Skills	2 Critical Thinking Skills
4 Research Skills	3 Graphics Skills
7 Collaborative Skills	11 Use of Precedents
15 Sustainable Design	17 Site Conditions
18 Structural Systems	28 Comprehensive Design
19 Environmental Systems	
20 Life Safety	
21 Building Envelop Systems	
23 Building Systems Integration	
25 Construction Cost Control	
26 Technical Documentation	
27 Client Role in Architecture	
29 Architect's Administrative Roles	
30 Architectural Practice	

Topical Outline: Building structural materials: Masonry, Steel, reinforced concrete. 20%
Basic Structural Systems modeling and simulation: frame, truss, and Plate. 20%
Advanced Structures simulation: Space frames, Shell structures, and 3D structure. 30%
Special Structures Modeling and Simulation: Surface structures, light weight and tension structures. 30%

Visiting Lectures: Andrew Whalley of Grimshaw USA, Inc; Tim Eliassen of Tri Pryamid Structures, Inc; Mark Simmons of Front Inc; Nick Goldsmith of FTL Design Engineering Studio, Jamie Carpenter of Jamie Carpenter Design Associates, Inc

Prerequisites: ARCH 531, 532, 533, 534, 535, 536

Textbooks / Learning Resources: Various articles on architects' work
Previous years Case Studies Documents
CAD Files from architects offices

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Lindsay Falck (coordinator), Mohamad Al Khayer, Yun Kyu Yi, Ali Malkawi

Course Number: ARCH 632-001 Course Title: Deployable Structures

Total Credits Awarded: 1 Course Units

Course Description: Introduction to the history, theories and application of the rapidly growing field of deployable structures, through hands on experiments conducted in workshop environments. Students develop skills in making deployable structures.

Course Goals & Objectives:

- The course's objective is to introduce various concepts and techniques of dployable structures.
- Introduction to the: design, modeling, simulation and the excution of deployable structures, which are complex geometric structural configurations, that are used as a temporarry, and rapid assembly structures.
- Experiments using the hand (during the construction and observation of physical deployable models)
- Modeling and Simulation of deployable sturctures using computer simulation tools.

Student Performance Criterion:

Fulfill

2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
5 Formal Ordering Systems
6 Fundamental Design Skills
7 Collaborative Skills
11 Use of Precedents
18 Structural Systems
20 Life Safety
21 Building Envelope Systems
23 Building Systems Integration
24 Building Materials and Assemblies
28 Comprehensive Design

Topical Outline:

- 10% Geometric studies of Platonic and Archimedean solids, Space filling geometries
- 10% Topology and morphological transformations
- 10% Studies of different mechanical joints
- 10% Studies structural behavior of deployable structures
- 20% Computer simulation of the deployment using Solid Works software
- 20% Build basic deployable structures with link, skeletal, and continuous - members
- 20% Building full scale deployable structure as a groups

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources: Writings of Dr. Alkhayer on deployable systems
Various articles on geometry, Morphology, structural behavior, robotics, and deployable structures
Mobile and Rapid Assembly Structures

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: Mohamad Al Khayer

Course Number: ARCH 632 002 Course Title: Simulation and Design

Total Credits Awarded: 1 Course Units

Course Description: Simulation is to predict the behavior of the system. Advanced computer technology made it possible for building simulation to be part of the design process. The class teaches different building simulation domains in architecture to give an in-depth view of simulation and design process.

Course Goals & Objectives: The course provide students with 1) An understanding of building design simulation methods 2) Hands-on experience in using computer simulation models and 3) Exploration of the technologies, the underlying principles, and the potential applications of a simulation tool in architecture.

Student Performance Criterion:

Fulfill	Partially Fulfill
15 Sustainable Design	12 Human Behavior
17 Site Conditions	20 Life Safety Systems
19 Environmental Systems	21 Building Envelope Systems
22 Building Service Systems	22 Building Material and Assemblies

Topical Outline:
Energy and Passive Solar Systems - 25%
Lighting and Daylighting Systems – 22%
Computational Fluid Dynamics (CFD) – 25%
Design Integration – 20%
Other simulation domains – 8%

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources: Building simulation domains: Sun-path, Ecotect, EnergyPlus, LightScape, Radiance, Flovent, etc
CAD: Rhinoceros, SketchUp

Dates Offered: Every Spring

Faculty Assigned: Spring 2008: Ali Malkawi Spring 2009: Yun Kyu Yi

Course Number: ARCH 632-004 Course Title: Design for Light Structures

Total Credits Awarded: 1 Course Units

Course Description: The course focus is on the structural design principals underlying the design and fabrication of low-mass/high-strength structures.

Course Goals & Objectives: To gain both a qualitative and quantitative grasp of the behavior and aesthetics of lightweight structures, their materials and methods of fabrication and assembly.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
6 Fundamental Design Skills
7 Collaborative Skills
15 Sustainable Design
17 Site Conditions
18 Structural Systems
21 Building Envelope Systems
23 Building Systems Integration

Topical Outline:

35% Lectures covering the following:

- Light weight/ high-strength materials.
- Weight-minimized structural elements and configurations where bending is avoided and geometry is exploited.
- Holistic approaches to overall structural systems design, integrating structural performance with other functions such as enclosure, heat and light transfer, acoustic performance and the integration of polymer based weather barrier materials.
- Transparent and translucent materials in load bearing applications.
- Component based design, off-site fabrication methods, on-site assembly and disassembly (recycling) and a critical examination of total embodied energy of a structural assembly.
- The relationship of light structures to site, considering permanence, site sensitivity and accessibility.
- Anticipating and avoiding failure, considering thermal stresses, corrosion, material incompatibility, leakage, excessive deflection etc.
- Aesthetics and the overriding need and desire for visible light and the nature of collaboration between engineer, architect, artist and fabricator.

25% Class discussion of the weekly readings
40% Two design exercises, the first an individual project and the second a group design project.

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources: Texts: *Lightness* by Adriaan Beukers and *Refabricating Architecture: How Manufacturing Methodologies are Poised to Transform Building Construction* by Stephen Kieran, James Timberlake

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: Jon Morrison

Course Number: ARCH 632-005 Course Title: Design of Responsive Building Envelopes

Total Credits Awarded:	1 Course Units
Course Description:	The course explores the role of performance in the design of responsive building envelopes. The responsive building envelopes will respond to both types of architectural performance parameters-- programmatic as well as climate constraints.
Course Goals & Objectives:	Understand history of building envelopes, research climate response of regional building envelopes, design of responsive building envelope, use of simulation software (Ecotect), production of building envelope working drawing set.
Student Performance Criterion:	Fulfill 4 Research Skills 7 Collaborative Skills 8 Western Traditions 9 Non-Western Traditions 11 Use of Precedents 15 Sustainable Design 17 Site Conditions 18 Structural Systems 19 Environmental Systems 21 Building Envelope Systems 23 Building Systems Integration 24 Building Materials and Assemblies 26 Technical Documentation
Topical Outline:	Research- Building Envelopes Precedent (10%), Research- Climate Performance (10%), Design- Preliminary (15%), Design- Development and Documentation (25%)
Prerequisites:	ARCH 531, 532, 533, 534, 535, 536, 631
Textbooks / Learning Resources:	Course Reader
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008 & 2009: Phu Hoang

Course Number: ARCH 632-006 Course Title: Component-Based Design

Total Credits Awarded: 1 Course Units

Course Description: Through case studies and team projects, students explore how traditional and cutting edge materials in conventional and non-conventional applications are used in building assembly design.

Course Goals & Objectives: The course intends to expose students to varying performative technology and system applications in the architectural design process. Students will participate in collaborative teams with outside professionals to develop and build their own component design project. Parallel research will foster basic knowledge of building science (physics, chemical processes) to serve as a pretext for the projects. The course culminates with a presentation and design booklet documenting the component design proposal and a defined research process as it relates to originally defined performance goals. Techniques such as "technology transfer" with other professions are utilized to maximize opportunities for innovation.

Student Performance Criterion:

Fulfill

1 Speaking and Writing Skills
2 Critical Thinking Skills
4 Research Skills
7 Collaborative Skills
15 Sustainable Design
18 Structural Systems
19 Environmental Systems
21 Building Systems Integration

Topical Outline: The Future of Systems and Materials (9%); Fundamentals of Performance Based Design (9%); Material Invention (9%); Optimization of High Performance Walls (9%); Reducing the Carbon Foot Print (9%); Beyond Traditional Notions of Architectural Materials and Systems (9%); Exploration of Material Innovation (9%); Innovation in Global building Design and Construction Industry (9%); Dynamically Responsive Enclosures (9%); Technology Transfers in Architecture (9%); Smart Materials and Systems (9%). Include percentage of time in course spent in each subject area

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources: James Marston Finch, American Building: The Environmental Forces that Shape It (Schoken Books, 1972); Carmody, Selkowtiz, Lee, Arasteh, Willmert, Window Systems for High Performance Buildings (W.W. Norton & Co., 2004); Pavillion (E.P. Dutton & Co., Inc., 1972); Addington, Schodek, Smart Materials and Technologies (Architectural Press, 2005)

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: Mark Igou

Course Number: ARCH 632-401 Course Title: Surface/Effects

Total Credits Awarded:	1 Course Units
Course Description:	The course examines the perceptual effects of the building surface and its spatial and technical performances. Experimentation with specific material and tectonic assemblies leads to the construction of full scale prototypes.
Course Goals & Objectives:	To develop hands-on, art-based methodologies for the design of innovative building surfaces. To understand and be informed in design by the historical trajectory of curtain wall design, advances in unitized systems, newly-developed materials and assemblies as well as the effects of transparency, “Sheer Opacity” and the return of pattern and ornament.
Student Performance Criterion:	Fulfill 3 Graphics Skills 5 Formal Ordering Systems 21 Building Envelope Systems 24 Building Materials and Assemblies
Topical Outline:	Building Surface Typologies Building Surface Materials Curtain Wall Precedence Design Intentions (Material, Surface, Effects) Research Proposal Documentation Half scale mock-up and documentation Final Full scale mock–up and documentation
Prerequisites:	ARCH 531, 532, 533, 534, 535, 536, 631
Textbooks / Learning Resources:	Extensive bibliography
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008 & Spring 2009: Cathrine Veikos

Course Number: ARCH 638-001 Course Title: Building Acoustics

Total Credits Awarded: 0.5 Course Units

Course Description: This course covers the fundamentals of architectural acoustics, the relationship between sound and space, encouraging students to consider how buildings sound.

Course Goals & Objectives:

- Develop basic acoustics theory.
- Understand history of performance space design.
- Conduct practical assignments to reinforce theory and to test students understanding.
- Visit the Arup Soundlab to underline importance of listening in acoustic design.

Student Performance Criterion:

Fulfill
22 Building Service Systems
24 Building Materials and Assemblies

Topical Outline:

• Introduction to Acoustic Consulting – 1 lecture (4 hours)	15%
• Fundamentals of Acoustics – 2 lectures (8 hours)	32%
• Arup SoundLab demonstration – 1 lecture (2 hours)	8%
• History of Performance Space Design – 1 lecture (4 hours)	15%
• Assignment #1 Boom Box – 1 lecture (4 hours)	15%
• Assignment #2 Sound Space – 1 lecture (4 hours)	15%

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources: None

Dates Offered: Every Spring

Faculty Assigned: Spring 2008: Neill Woodger Spring 2009: Joe Solway

Course Number: ARCH 638-002 Course Title: Building Skins

Total Credits Awarded: 0.5 Course Units

Course Description: This course focuses on the parameters guiding the design, analysis and construction of high-performance building enclosures.

Course Goals & Objectives: Students will critically study the entire process toward the realization of a sophisticated design for a building enclosure and demonstrate a small portion of a wall for an actual project for the FDA. A series of lectures will allow the students to apply a widening set of fundamental structural, constructive and thermal criteria, through a selection of materials, conceptual estimating and scheduling, testing procedures and finally to construction. The result of the exercise is intended to be both experimental and believable.

Student Performance Criterion:

Fulfill	Partial Fulfill
2 Critical Thinking Skills	25 Construction Cost Control
3 Graphic Skills	
4 Research Skill	
6 Fundamental Design Skills	
21 Building Materials and Assemblies	
26 Technical Documentation	

Topical Outline:
Structural Skins: 25%
Thermal Performance 15%
Detailing 15%
Project Management 30%
BIM 15%

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources: None

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: Alberto Cavallero

Course Number: ARCH 638-003 Course Title: Building Systems

Total Credits Awarded:	0.5 Course Units
Course Description:	Each week, the seminar focuses on a different building topology, considering how its systems and infrastructure are driven by specific functional requirements. The class traces both current and emerging techniques within each typology with a special emphasis on areas for design innovation and sustainability.
Course Goals & Objectives:	Cultivate an understanding of building systems as applied to specific building typologies and develop an ability to define some simple criteria to select and design for specific system types. Weekly lectures by engineers. Course culminates with an in-depth case study presentation from each participating student.
Student Performance Criterion:	Fulfills 23 Building Systems Integration 22 Building Service Systems 15 Sustainable Design
Topical Outline:	HVAC: Tall Buildings 20% Electrical: Mid-rise Corporate/Commercial Buildings 20% Plumbing: Laboratories and Technology Buildings 20% Lighting and Acoustics: Cultural Buildings 20% Sustainability: Academic/Housing 20%
Prerequisites:	ARCH 531, 532, 533, 534, 535, 536, 631
Textbooks / Learning Resources:	Weekly lectures by visiting engineers from selected disciplines are supported by periodic field trips, readings, and discussion. Case study presentation from each participating student.
Dates Offered:	Spring 2009
Faculty Assigned:	Spring 2008 & 2009: Stuart Mardeusz

Course Number: ARCH 638-004 Course Title: Daylighting

Total Credits Awarded: 0.5 Course Units

Course Description: This course introduces fundamental daylighting concepts and tools for analyzing daylighting design. The central objective of the course is to provide students with both the fundamental knowledge and tools to analyze the effectiveness of design options.

Course Goals & Objectives:

Ability to formulate a good daylighting design
Site and climate analysis for available daylight and surrounding obstructions
Fundamental principles of daylighting design
Metrics and goals of daylighting design
Interpretation of analysis results for making design recommendations
Interaction and integration between daylighting and electric lighting design

Student Performance Criterion:

Fulfill

2 Critical Thinking Skills
6 Fundamental Design Skills
15 Sustainable Design
17 Site Conditions
19 Environmental Systems
21 Building Envelope Systems

Topical Outline:

Fundamental Knowledge in Daylighting	60%
Daylighting Analysis	30%
General Integrated High Performance Design	10%

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources:

Daylighting Performance and Design
Daylighting, Architecture, and Health
http://radsite.lbl.gov/radiance/

Dates Offered: Every Spring

Faculty Assigned:

Spring 2008 John An
Spring 2009: Naree Phinyawatana

Course Number: ARCH 638-005 Course Title: Lighting

Total Credits Awarded: 0.5 Course Units

Course Description: Principles of Lighting is a comprehensive course in architectural lighting design intended to develop a basic understanding of the principles of science and vision relating to lighting, and a similar understanding of lighting measurement and terminology.

Course Goals & Objectives: The overall goal of the course is to establish an understanding of the impact of lighting on architecture and a foundation for the possible practice of lighting design by building a knowledge base of electric lighting design technologies, in particular, lamps and luminaries.

Student Performance Criterion:

Fulfills

02 Critical Thinking
04 Research Skills
12 Human Behavior
19 Environmental Systems
26 Technical Documentation

Topical Outline:

Science of Light 15%
Light types 30%
Lighting Design criteria 15%
Lighting Design 40%

Prerequisites: ARCH 531, 532, 533, 534, 535, 536, 631

Textbooks / Learning Resources: *Lighting Education Fundamentals,* Illuminating Engineering Society of N. America, 2000 Ed.
IESNA Lighting Ready Reference, 4th Edition

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009: Craig Bernecker

Course Number: ARCH 671-001 Course Title: Professional Practice I

Total Credits Awarded: 0.5 Course Units

Course Description: This course consists of a series of four workshops that introduce students to a diverse range of practices that architects currently employ and the basics of architectural profession.

Course Goals & Objectives: The course goal is for students to gain an understanding of the profession by using the project process as a framework, the course comprises a survey of the architectural profession—its licensing and legal requirements, its evolving types of practice, fees and compensation, its adherence to the constraints of codes & regulatory agencies, client desires and budgets, and its place among competing & allied professions and financial interests. The basis of the course is to provide a critical forum of discussion to understand the forces, which at times impede, as well as encourage innovation & leadership. Students also develop the skills necessary to effectively communicate to clients, colleagues and user groups. Trends such as globalization, ethics, collaborative practice, sustainability issues and technology shifts are analyzed in their capacity to affect the practice of an architect.

Student Performance Criterion:

Fulfill	Partially Fulfill
1 Speaking and Writing Skills	7 Collaborative Skills
2 Critical Thinking Skills	16 Program Preparation
4 Research Skills	
13 Human Diversity	
27 Client Role in Architecture	
29 Architect's Administraitve Roles	
30 Architectural Practice	
31 Professional Development	
32 Leadership	
33 Legal Responsibilities	
34 Ethics and Professional Judgement	

Topical Outline:
Firm Visit/Discussions- 50%
Lecture/Panel Discussions:
Introduction to Professional Practice- 10%
Services- Documents/Contracts—15%
Firms working locally/regionally/globally (Guest Lecturers)- 20%
Design Services & Allied Fields- 5%

Prerequisites: None

Textbooks / Learning Resources:
Professional Practice: A Guide for Turning Designs into Buildings, Paul Segal FAIA, Norton, New York, 2006
The Architect's Handbook of Professional Practice, Student Edition, American Institute of Architects, Wiley, New York, 2001
AIA Contract Documents Software Student Edition (to be provided by AIAdocuments)
Assigned readings to be posted in the Course folder prior to firm visits.

Dates Offered: Every Fall

Faculty Assigned: Fall 2008 & 2009: Mark Gardner

Course Number: ARCH 672-001 Course Title: Professional Practice II

Total Credits Awarded: 0.5 Course Units

Course Description: Through lectures, discussions, workshops, and a built example, students explore the obligations and relationships between the many parties involved in a building project and the organizational procedures that tie the parties together.

Course Goals & Objectives: Develop a critical perspective regarding the relationships between an architect and the client, the public, the design team (consultants) and the building team (contractors). Understand the importance of process in the product (building).

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills	30 Architectural Practice
2 Critical Thinking Skills	32 Leadership
7 Collaborative Skills	33 Legal Responsibilities
29 Architect's Administrative Roles	34 Ethics and Professional Judgment

Topical Outline:
General Review & Introduction (10%)
Architects, Consultants & Clients & the Design Process (30%)
Builders & Fabricators & the Construction Process (30%)
Case Study & Visit (Kimmel Center) (30%)

Prerequisites: ARCH 671

Textbooks / Learning Resources:
AIA Handbook of Professional Practice / AIA Contracts / Code of Ethics
Selected Readings: T. Leslie, K. Frampton, various short articles

Dates Offered: Every Spring

Faculty Assigned: Spring 2008 & 2009 Charles Capaldi

Course Number: ARCH 701-201/202/203/204 Course Title: Design Studio V

Total Credits Awarded:	2 Course Units
Course Description:	Advanced design studio. Topics and instructors vary. Students select studio sections in a lottery-bidding arrangement.
Course Goals & Objectives:	To explore the development of architectural projects at different scales.

Student Performance Criterion:

Fulfills

2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
6 Fundamental Design Skills
7 Collaborative Skills
10 National and Regional Traditions
11 Use of Precedents
15 Sustainable Design
16 Program Preparation
17 Site Conditions
18 Structural Systems
19 Environmental Systems
20 Life Safety
21 Building Envelope Systems
22 Building Service Systems
23 Building Systems Integration
24 Building Materials and Assemblies
25 Construction Cost Control
26 Technical Documentation
27 Client Role in Architecture
28 Comprehensive Design

Topical Outline:	Varies with instructor. Research, Analysis, Technique, Generation, Development, Presentation
Prerequisites:	ARCH 602
Textbooks / Learning Resources:	Readings, Lectures, Discussions
Dates Offered:	Every Spring
Faculty Assigned:	201: Spring 2007 & 2008: Ali Rahim, coordinator for all 702 studios 202: Fall 2007 & 2008: Enrique Norten, David Maestres, Jose Castillo 203: Fall 2007: Peter McCleary, Ali Malkawi, & Mohamad Al Kayer, Fall 2008: Peter McCleary & Mohamad Al Kayer 204: Fall 2007 & 2008: Matthias Hollwich

Course Number: ARCH 701-211 Course Title: Design Studio V in London

Total Credits Awarded: 2 Course Units

Course Description: An advanced Architectural Design Studio at the Architectural Association's School of Architecture, London.

Course Goals & Objectives: Engage aspects of urban life and urban form in London, and realize them in design propositions and explorations.

Student Performance Criterion:

Fulfills

2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
6 Fundamental Design Skills
7 Collaborative Skills
10 National and Regional Traditions
11 Use of Precedents
15 Sustainable Design
16 Program Preparation
17 Site Conditions
18 Structural Systems
19 Environmental Systems
20 Life Safety
21 Building Envelope Systems
22 Building Service Systems
23 Building Systems Integration
24 Building Materials and Assemblies
25 Construction Cost Control
26 Technical Documentation
27 Client Role in Architecture
28 Comprehensive Design

Topical Outline: Include percentage of time in course spent in each subject area

Prerequisites: ARCH 602

Textbooks / Learning Resources: Readings and Discussions. Tours of London and local lecturers. The whole culture of the AA

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Homa Farjadi

Course Number: ARCH 704-201/202/203/204/205/206/207 Course Title: Research Studio

Total Credits Awarded:	2 Course Units
Course Description:	Advanced design research studio. Topics and instructors vary. Students select studio sections in a lottery-bidding arrangement.
Course Goals & Objectives:	To explore different kinds of design research in architecture, from social analysis to formal generation to sustainable design.

Student Performance Criterion:

Fulfills

2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
6 Fundamental Design Skills
7 Collaborative Skills
10 National and Regional Traditions
11 Use of Precedents
15 Sustainable Design
16 Program Preparation
17 Site Conditions
18 Structural Systems
19 Environmental Systems
20 Life Safety
21 Building Envelope Systems
22 Building Service Systems
23 Building Systems Integration
24 Building Materials and Assemblies
25 Construction Cost Control
26 Technical Documentation
27 Client Role in Architecture
28 Comprehensive Design

Topical Outline: Varies with instructor.
Research, Analysis, Technique, Generation, Development, Presentation

Prerequisites: ARCH 701

Textbooks / Learning Resources: Readings, Lectures, Discussions

Dates Offered: Every Spring

Faculty Assigned:
201: Spring 2008 & 2009: Ali Rahim, coordinator for all 704 studios
202: Spring 2008: Marion Weiss, Spring 2009: Marion Weiss / Megan Born
203: Spring 2008: Amale Andraos, Spring 2009: Stefan Behnisch, Martin Haas, Jackie Wong
204: Spring 2008 Cecil Balmond & Jenny Sabin , Spring 2009: Cecil Balmond & Roland Snooks
205: Spring 2008 & 2009 Stephen Kieran & James Timberlake
206: Spring 2008 & 2009: Homa Farjadi
207: Spring 2009: David Ruy

Course Number: ARCH 706-201 Course Title: Independent Design Thesis

Total Credits Awarded: 2 Course Units

Course Description: In the final year of the MArch program, students may elect to take Independent Design Thesis, which allows them to undertake a self-motivated investigation under the supervision of the Thesis Advisor.

Course Goals & Objectives: To: Independently pose a critical question framed within issues of contemporary architecture and/or technology, develop that question through a body of research, and articulate the proposal through an architectural project, which varies in scope and scale.

Student Performance Criterion:

All Thesis Projects	Some Individual Thesis Projects
1 Critical Reading and Writing Skills	7 Collaborative Skills
2 Critical Thinking Skills	8-10 Traditions
3 Graphics Skills	11 Use of Precedent s
4 Research Skills	12 Human Behavior
5 Formal Ordering Skills	13 Human Diversity
6 Fundamental Design Skills	14 Accessibility
16 Program Preparation Skills	15 Sustainable Design
17 Site Conditions	19 Environmental Conditions
18 Structural Systems	21 Building Envelope
24 Building Materials	22 Building Service
28 Comprehensive Design	23 Building Systems
	27 Client Role
	32 Leadership

Topical Outline: Varies. Theses in the past have varied between urban design to very highly scaled specific technological issues. Consistent is the extensive research phase, verbal and graphic presentations to groups (2-6 throughout the year), program preparation and a full semester of design development.

Prerequisites: Complete mid-high to high performance is all previous studios
Students qualify by submitting a preliminary proposal in the fall and a more developed proposal with extensive research at the beginning of the spring semester. Proposals are assessed by a group of the senior faculty.

Textbooks / Learning Resources: Varies. Students are required to submit annotated bibliographies at two points in the assessment process. Students typically form independent advisory groups from multi-disciplinary sources in the university and community.

Dates Offered: Every Fall—Research component. Student are encouraged to take an independent study credit to develop research. Every Spring—Design Component.

Faculty Assigned: Spring 2008 & 2009: Annette Fierro

Course Number: ARCH 711-001 Course Title: Topics in History and Theory: Spaces of Tourism

Total Credits Awarded: 1 Course Units

Course Description: The seminar explores ideas and projects establishing new relationships between architecture and tourism. By looking at the techniques and procedures undertaken by tourism, it investigates their spatial effects, cultural and political transformations.

Course Goals & Objectives:
- To expose students to one of the dominant forces transforming architectural space, cities and territories today.
- To foster a critical engagement of these forces by looking at its specific techniques and its broader effects.
- To suspend the (negative) judgment that the architectural profession tends to have of the phenomenon of tourism.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
4 Research Skills
7 Collaborative Skills
8 Western Traditions
11 Use of Precedents
12 Human Behavior
13 Human Diversity

Topical Outline:
- Tourism is Life
- From Explorers to Travelers to Tourists
- Representations of Tourism: From cartographies, to the postcard and the souvenir
- Tourism and Spectacle
- Against commodification and the Economy of Experience
- The Time and Space matrix of tourism
- New Urbanities of Tourism: Between renewal and exclusion
- The ecologies of Tourism
- Tourism and visual culture
- Case Studies of the architecture of Tourism: Gastronomy, Hospitality, Leisure
- The dark side of tourism/Tourism and Resistance
- The tourist as new citizen/the tourist space as new territory

Prerequisites: None

Textbooks / Learning Resources: Readings by John Urry, Dean McCannell, Joan Ockman, Peter Sloterdijk, Michel Houellebecq, Susan Stewart, Lucy Lippard, Marc Auge, Susan Fainstein, Ryszard Kapuscinski and others

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Jose Castillo

Course Number: ARCH 711-002 Course Title: Topics in History and Theory: Spectacle/Post Spectacle

Total Credits Awarded:	1 Course Units
Course Description:	Investigates the history and present implications or manifestations of architecture as spectacle, media, imaging; and corollary as experiential space (immersive, phenomenal, propriosensory, effective and affective).
Course Goals & Objectives:	This seminar looks at current debates surrounding questions of spectacle, media, commodification and architecture through a history of spectacular culture, scrutinizing the rise of spectacular space and its transposition into mood and special effects. We will also examine the distractive and immersive realities of the postspectacular metropolis, and the attendant effects on an inhabitant that finds itself in constant oscillation between an authorized subject position (a spectator), and its dissolution into a fragmented and multiplied flux. The course will involve weekly presentations and seminar discussions of readings, case studies and issues and questions arising from each week's theme, including weekly presentations by students, and a final assignment.
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 4 Research Skills 7 Collaborative Skills 8 Western Traditions 11 Use of Precedents 12 Human Behavior 13 Human Diversity
Topical Outline:	1 Phantasmagorias c1800: Spectacle, Effect, Exhibition (Spectacular Display and Immersive Space c1800) 2 The Cult of Distraction: Attention, Counter-attention (Spectacular entertainment c1900) 3 Phantasmagorias c1850 (The commodity spectacle C19th) 4 Phantasmagorias c2000 (The commodity spectacle C20th/C21st) 5 The Medium is the Message (The birth of the "global village") 6 Glimpses of the USA (Architecture and the Cinematic) 7 The Society of the Spectacle (Proliferation of the stream of images) 9 Learning from Las Vegas (theatricalizing and theming of architecture) 10 Delirious Spaces (From space-as-spectacle to space-as-intensifier) 11 Mood Rivers (Atmosphere, effect, and vibe)
Prerequisites:	None
Textbooks / Learning Resources:	Reading List (Readings for the course are intended to extend the range and scope of material covered, to expose students to the debates and issues of more advanced history and theory, and to serve as a base for assignments. Required readings should be read in advance of each week's classes. Supplementary readings are provided.)
Dates Offered:	Fall 2007
Faculty Assigned:	Fall 2007: Helene Furjan

Course Number: ARCH 711-401

Course Title: Topics in History and Theory: Cultural Ecology: Uncovering the Roots of Green Building in the Early Modern Movement

Total Credits Awarded: 1 Course Units

Course Description: This course argues that the architects of the early 20th century did not neglect the environmental and cultural context of their buildings, but developed green buildings that combined attention to environmental issues with both imaginative approaches to social and cultural purposes, and a new understanding of aesthetic content.

Course Goals & Objectives:
- Introduce, explain and show the importance of cultural ecology.
- Re-read modern architecture from an ecological point of view.
- Show the interdependence of cultural and scientific approaches to ecology and architecture.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
4 Research Skills
8 Western Traditions
9 Non-Western Traditions
10 National and Regional Traditions
13 Human Diversity
15 Sustainable Design
34 Ethics and Professional Judgment

Topical Outline:

Review of contemporary ecological mandates (understanding overcoming the science-culture divide) 25 %
- pre- and post-industrial concepts of ecological order
- ecology and ethics
- ecology and building production
- cultural ecology

In-depth studies of specific buildings from the modern period (re-reading the modern tradition) 75 %
- introduce and explain models of cultural ecology
- show modern equivalents to historical types

Prerequisites: None

Textbooks / Learning Resources: 3 to 5 book chapters or essays per week, listed on the course syllabus, a few from the professor but most from architects, theorists, historians, and philosophers whose scholarship addresses ecology, modern architecture, or environmental ethics

Dates Offered: Every Fall

Faculty Assigned: Fall 2008: David Leatherbarrow & Richard Wesley

Course Number: ARCH 712-001

Course Title: Topics in History and Theory: Philosophy, Materials & Structures

Total Credits Awarded:	1 Course Units
Course Description:	This seminar explores the fields of structural engineering and materials science from a philosop ground students understanding of theory on materialist concepts.
Course Goals & Objectives:	To help students relate to their designs as load-bearing structures, expose them to the new materials that are available them, and help them understand the role of computer simulations in contemporary science.
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 4 Research Skills 24 Building Materials and Assemblies
Topical Outline:	20% structural engineering; 30% materials science; 20% computer simulations; 30% philosophy of science.
Prerequisites:	None
Textbooks / Learning Resources:	James Gordon "Structures and Materials".
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008 & 2009: Manuel DeLanda

Course Number: ARCH 712-002 Course Title: Topics in History and Theory: Arch Representation

Total Credits Awarded:	1 Course Units
Course Description:	The meaning and limits of architectural representation in contemporary and in a historical context, The relation of the phenomenal reality of architecture and its transformation in abstract representations
Course Goals & Objectives:	The main intention of the course is to establish closer relation between the work in the studio and the new way of thinking, presented in the lectures/seminars of the course.
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 4 Research Skills
Topical Outline:	Include percentage of time in course spent in each subject area
Prerequisites:	Pencil, notebook, clean hands and fresh mind
Textbooks / Learning Resources:	Maurice Merleau-Ponty, Phenomenology of Perception, Hans-Georg Gadamer, Truth and Method
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008 & 2009: Dalibor Veseley

Course Number: ARCH 711-003 Course Title: Topics in History and Theory: Informal Cities

Total Credits Awarded:	1 Course Units
Course Description:	Seminar will examine Informal Cities.
Course Goals & Objectives:	The term “informal” has been used with increasing frequency to describe economic and urban conditions, particularly in the Third World. These may include squatter settlements, *favelas*, black markets, land invasions, unregistered businesses, and other extra-legal practices and social formations. This course will approach the issue of informality as a working term that requires further investigation. We will look into the origins of the term and its related concepts, while simultaneously looking at urban conditions throughout the world that are considered informal in cities including Sao Paulo, Mexico City, Cairo, and Mumbai. In addition to looking at cities, we will consider how informality can be read in visual art, online communities, warfare, political movements, architectural design, squatting, and barter. Thus, we will explore the aesthetic, biological, political, and economic implications of “the informal” and develop a broader and more complex understanding of the term that applies to design as a whole.
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 4 Research Skills 8 Western Traditions 9 Non-Western Traditions 12 Human Behavior 13 Human Diversity
Topical Outline:	Class meetings will include brief lectures, discussions of the texts, film screenings, guest speakers, and short presentations of individual research. Weekly readings will have two parts: 1. a theoretical exploration of the concept of informality, and 2. a series of case studies that we will be exploring. Each class meeting will be devoted to both the theoretical texts and case studies.
Prerequisites:	None
Textbooks / Learning Resources:	Extensive Reading List
Dates Offered:	Spring 2008
Faculty Assigned:	Spring 2008: Daniella Fabricius

Course Number: ARCH 712-004

Course Title: Topics in History and Theory:
Contemporary Japanese Architecture:
Continuity and Change in the Built Environment

Total Credits Awarded:	1 Course Units
Course Description:	This course provides an in-depth exploration of contemporary Japanese architecture from Meiji to the present.
Course Goals & Objectives:	Informed by an historical overview of Japan since the mid-nineteenth century, the class examines the innovative and challenging work of Japan's most prominent architects and places it within the broader contexts of urbanization and globalization
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 4 Research Skills 9 Non-Western Traditions 11 Use of Precedents 12 Human Behavior 13 Human Diversity
Topical Outline:	Meiji and the West: Cross-Influences Le Corbusier, Antonin Raymond & Frank Lloyd Wright in Japan Concepts of Modernity in the 19'h & 20'' Centuries Visions of the Japanese House The Post-War City: Urbanism & Metabolism Philadelphia Museum of Art: Japan, Ando & Multimedia Event Boom and Bust: Japanese Architecture from 1970-2000 Technologies of Japanese Construction: From Traditional to New and Futuristic Materials Constructing Culture: Three Japanese Architects Struggle with Shinto Natural Disasters & Seismic Technologies Mega-Projects, Construction, Law and Scandals in Japan Japan's Architects Go Global & Foreign Architects in Japan: Ito, Sejima, Maki, Kuma, Ando, Ban, Abe, Kurokawa, Aoki, Mitsui, Tezuka, Inui. .. & Foster, Herzog & DeMeuron, Viiioly, FaA, Nouvel, KPF, SaM ... The Future of Japanese Architecture: The New Generation
Prerequisites:	None
Textbooks / Learning Resources:	Readings. A number of distinguished scholars and practitioners will participate in the class as guest lecturers including Dana Buntrock, Roman Cybriwsky, Carola Hein, Mimi Locher, Oetlef Mertins, Richard Farley, Jin Baek & Ken Tadashi Oshima.
Dates Offered:	Spring, 2008
Faculty Assigned:	Spring 2008: Stephanie Feldman

Course Number: ARCH 712-004

Course Title: Topics in History and Theory:
Transforming the Nursing Home:
"Part one of the Trilogy on Aging"

Total Credits Awarded: 1 Course Units

Course Description: A sponsored research seminar uses the planned refurbishment of an existing facility built in the 1960's to envision a future defined by progressive, sustainable, humanistic, technical and spatial advances.

Course Goals & Objectives: The seminar will work towards a new conception of sustained care that eliminates the loneliness, helplessness, and boredom that are pervasive throughout the elder care community. Innovative design will succeed where pill and therapies have repeatedly failed. All the work will be collated into a brochure and also. The work will ultimately be the basis for a 700 level design studio in Fall, 2009 and an International Conference on Aging at PENN in Summer 2010.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
4 Research Skills
7 Collaborative Skills
11 Use of Precedents
12 Human Behavior
13 Human Diversity

Topical Outline:
Healthcare turning into Wellness. How to infuse lifestyle quality into the care process (20%)
From healing people to healing the planet: Sustainability plus (20%)
The Nursing Resort. How to infuse activities into the daily routine. (20%)
The iPhone generation. Updating healthcare technology with today's hard- and software features. (20%)
The Walmart effect. (20%)

Prerequisites: None

Textbooks / Learning Resources: Classes were supported by a series of lectures and workshops by experts in the field. After the first six weeks, groups will travel around the globe to document and investigate onsite existing nursing arrangements, where students will interview experts in the field and document their discoveries with photos and videos.

Dates Offered: Spring, 2009

Faculty Assigned: Spring 2009: Matthias Hollwich

Course Number: ARCH 712-006

Course Title: Topics in History and Theory: ARCHITECTURE AND RACE

Total Credits Awarded: 1 Course Units

Course Description: The purpose of this course is to introduce students to the ways that architecture and race have been formulated in architectural history, architectural theory and architectural form.

Course Goals & Objectives: This course provides students with a working knowledge of the most prominent definitions of race from the Enlightenment to the postwar period. These definitions cross the disciplines of philosophy, biology, political theory and cultural studies. Although this course begins interrogating this intersection from the perspective of African-American and Black issues of identity in architecture, several of the sessions, readings, and guests will address issues that pertain to other people of color.

Student Performance Criterion:

Fulfill

1 Speaking and Writing Skills
2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
11 Use of Precedents
12 Human Behavior
13 Human Diversity

Topical Outline:

GENERAL DEFINITIONS I: BIOLOGY, ANTHROPOLOGY, NATURAL PHILOSOPHY
GENERAL DEFINITIONS II: POLITICS, SOCIOLOGY, CULTURAL STUDIES
RACE AND ARCHITECTURAL ENLIGHTENMENT THEORY I: PHYSIOGNOMY, TAXONOMY, AND CHARACTER
RACE AND ARCHITECTURAL ENLIGHTENMENT THEORY II: AESTHETICS, PRIMITIVISM, AND ORGANICISM
VIOLLET-LE·DUC: ARCHITECTURE, RACE, AND "DOMESTIC ETHNOGRAPHY"
SEMPER, SOTTICHER: AUTOCHTHONOUS GENIUS OF GREEK FORMS
RACE AND PLACE
URBAN SPRAWL, SOCIAL HOUSING, AND THE REFORM MOVEMENT OF MODERN ARCHITECTURE
THE POLITICS OF RACE: NEOLIBERALISM AND ADVOCACY PLANNING
BEYOND POSTWAR FORMALISM: RACE AS STRUCTURAL, BIOLOGICAL PRINCIPLE
CONRAD FIEDLER: ARCHITECTURE, FORMALISM, AND ANTHROPOLOGY

Prerequisites: None

Textbooks / Learning Resources: Extensive readings and guest lecturers

Dates Offered: Spring 2008

Faculty Assigned: Spring 2008: Charles Davis

Course Number: ARCH 712-006

Course Title: Topics in History and Theory: Network Culture. The History of the Contemporary

Total Credits Awarded: 1 Course Units

Course Description: The purpose of this seminar is to introduce students to a historical understanding of the changed conditions that characterize our networked age.

Course Goals & Objectives: The objective of this course is to introduce students to historical thinking as a way of understanding the contemporary world and architecture's place in it. The course emphasizes critical thinking, reading, and writing skills. The main outcome of the course, however, is a book that combines the standard research paper with visual presentation in order to teach students how to produce a visual argument in tandem with a verbal argument.

Student Performance Criterion:

Fulfill

1 Speaking and Writing Skills
2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
11 Use of Precedents
12 Human Behavior
13 Human Diversity

Topical Outline:

1. Speaking and Writing Skills	25%
2. Critical Thinking Skills	25%
3. Graphics Skills	25%
4. Research Skills	25%

Prerequisites: None

Textbooks / Learning Resources: Kazys Varnelis, ed. *Networked Publics* (Cambridge: The MIT Press, 2008).
All other texts online.

Dates Offered: Every Spring

Faculty Assigned: Spring 2009: Kazys Varnelis

Course Number: ARCH 712-007 Course Title: Topics in History and Theory: Designing Asia

Total Credits Awarded: 1 Course Units

Course Description: The course presents the emerging landscape of Asia as a theater of new challenges and conceptualizations for architecture.

Course Goals & Objectives: The course, while introducing this metamorphic landscape through a selective survey of key practices and productions, is more interested in identifying key and critical thoughts and conceptual positions about practice, design and reflection in that context. A multi-disciplinary approach will be employed to confront this evolving and dynamic situation. The course additionally will present materials, from literature and film, and social science discourse and new media, and guest visits by and seminars with sociologists, anthropologists and writers involved in charting the new coordinates of this landscape. The course will also take advantage of a couple of regional resources: conversations with some key architectural firms in PA/NY with practices in Asia and attending a major conference on contemporary Indian architecture in New York City.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
4 Research Skills
7 Collaborative Skills
9 Non-Western Traditions
10 National and Regional Traditions
12 Human Behavior
13 Human Diversity
15 Sustainable Design

Topical Outline:

Modernity and Asia (20%)
Architecture for the Tropics (10%)
Early Modernists in Asia (10%)
Architecture and Asian Cities (10%)
Architecture as Process (10%)
Architecture in China (10%)
Architecture in Japan (10%)
Architecture in India (10%)
Other topics (10%)

Prerequisites: None

Textbooks / Learning Resources: Selected books and articles, and class handouts

Dates Offered: Spring 2009

Faculty Assigned: Spring 2009: Kazi Ashraf

Course Number: ARCH 713-001 Course Title: Ecology, Technology, and Design

Total Credits Awarded: 1 Course Units

Course Description: This course draws on theories of ecological design and on the history and philosophy of techno complex interaction between the built and natural environments.

Course Goals & Objectives:
Develop a working ability with eco-system and energy flow diagrams
Understand the major principles of ecological design
Understand major theories of technological evolution
Apply techniques of ecological and technological design to analyze an item of design

Student Performance Criterion:

Fulfill	Partially Fulfill
15. Sustainable Design	1. Speaking and Writing Skills
19. Environmental Systems	2. Critical Thinking Skills

Topical Outline:

Ecology (50%)
- Ecology, Technology, & Design:
- Ecology: Flows, Stocks, and Effects
- Consumption and Waste: How Much is Enough?
- Thermodynamics: Sun, Fire, & Food
- Cybernetics: Ecologies, Markets, Devices
- Ecological Design

Philosophy of Technology (20%)
- Technology: Inventions, Traditions, and Diffusion
- Technology: Maintenance, Operation, and Use
- Evolution, Growth, & Change

Ecological Design (30%)
- Biophilia, Biomimicry, Bioclimatics
- Net Zero: Oekonomics
- Conditioned Space: Conditioned Bodies
- Healthy Building : Healthy City

Prerequisites: Arch 533 & 534: Environmental Systems, or equivalent

Textbooks / Learning Resources:
W. Braham and J. Hale, *Rethinking Technology: A Reader in Architectural Theory*. London: Routledge, 2006.

Howard T. Odum, *Environment, Power, and Society for the Twenty-First Century: The Hierarchy of Energy*. New York: Columbia University Press, 2007.

Dates Offered: Every Fall

Faculty Assigned: Fall 2008: Kevin Pratt Fall 2007: William Braham

Course Number: ARCH 715-002 Course Title: Writing on Architecture

Total Credits Awarded: 1 Course Unit

Course Description: The aim of this course is to train students in the principles and techniques of nonfiction writing as it relates to architecture.

Course Goals & Objectives: The practice of architecture relies on the clear and effective communication of design ideas, to clients, reviewing agencies, the public, and other interested parties. This communication occurs through drawings, models, and verbal presentations, and often—especially in the early stages of a project—through the written word

Some of the topics of discussion explored in the writing process are: What are the relative roles of function and aesthetics? What is the proper relation between tradition and innovation? How should an urban building take into account its setting? Are there rules of design? What role does style play in architecture? What role does taste play in architecture? Is opinion relevant without documentation?

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
4 Research Skills
8 Western Traditions
10 National and Regional Traditions

Topical Outline: Class meets 3 hours per week. Students bring essays to class and discuss each in turn. Longer essays are distributed before the class.

Prerequisites: none

Textbooks / Learning Resources: Course texts: William Strunk, Jr. & E. B. White, *The Elements of Style, Fourth Edition*; William Zinsser, *On Writing Well: The Classic Guide to Writing Nonfiction*.

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Witold Rybczynski

Course Number: ARCH 717-001 Course Title: Self-Organization & Dynamics of Cities

Total Credits Awarded:	1 Course Units
Course Description:	This seminar explores a variety of centralized and decentralized processes affecting urban dynamics: markets and networks of small producers; urban food chains and epidemics; the creation of new languages and urban dialects.
Course Goals & Objectives:	To give students a concrete sense of social context for their projects and give them the necessary theoretical background to understand urban centers in their full complexity.
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 4 Research Skills 19 Environmental Systems
Topical Outline:	20% Urban Economics; 20% Urban Biology; 10% Urban Linguistics; 10% Military Theory; 40% Philosophy of History.
Prerequisites:	None
Textbooks / Learning Resources:	Hohenber and Lees "The Making of Urban Europe, 1000-1950."
Dates Offered:	Every Fall
Faculty Assigned:	Fall 2007 & 2008: Manuel DeLanda

Course Number: ARCH 718-401 Course Title: Japanese Architecture

Total Credits Awarded:	1 Course Units
Course Description:	Introduction to major monuments and architectural forms of Japan from earliest times through the 18th century
Course Goals & Objectives:	Students recognize what makes a building Japanese Students know about and are able to use in their own design or writing key Japanese buildings Students are able to talk about Japanese buildings Students produce major research paper or project about one aspect of Japanese architecture
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 4 Research Skills 9 Non-Western Traditions
Topical Outline:	Ancient Japanese Architecture 48% Medieval Japanese Architecture 30% Pre-modern Japanese Architecture 13% Modern Japanese Architecture 9%
Prerequisites:	None
Textbooks / Learning Resources:	William Coaldrake, Architecture and Authority in Japan Isozaki, Japan-ness in Architecture Nishi and Hozumi, What is Japanese Architecture Young and Young, Introduction to Japanese Architecture Numerous periodical articles Visual Resources Image Collection
Dates Offered:	Fall 2008
Faculty Assigned:	Fall 2008: Nancy Steinhardt

Course Number: ARCH 722-001 Course Title: Advanced Drawing

Total Credits Awarded:	1 Course Units
Course Description:	The course explores painting, drawing, computer scripting, color theory, pattern theory, airbrushing, watercolor, etching, manual drawing, fabrication using CNC, laser cutting, milling, digital embroidery machines.
Course Goals & Objectives:	The premise of this course is to revisit the tradition of drawing and painting and to re-examine them with a new set of tools, which incorporate time, response and behavior as parts of a continuous medium.
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 Critical Thinking Skills 3 Graphics Skills 4 Research Skills 5 Formal Ordering Systems 6 Fndamental Design Skills 7 Collaborative Skills 11 Use of Precedents 12 Human Behavior 13 Human Diversity 26 Technical Documentation
Topical Outline:	Open & Closed Figures – 30% Gradient, Line, & Highlight – 40% Stitch Conversion / Machining – 15% Final Textile Production – 15%
Prerequisites:	None
Textbooks / Learning Resources:	Benjamin, Walter. Work of Art in the Age of Mechanical Reproduction. Illuminations 1988. Blossfeldt, Karl. Art Forms In Nature. The Complete edition. Schirmer Art books. 1999. Cappock Margarita. Francis Bacon's Studio. Merrel, 2005. Cohen Margaret. Fluid States. *Cabinet* vol 16. pp 75-82. 2005 Cook, Andrea. The Curves of Life, Being an Account of Spiral Formations and Their Application to Growth in Nature, to Science and to Art, Dover. 1914 Da Vinci, Leonardo. The complete drawings and paintings. Taschen Deleuze Giles. Francis Bacon. The Logic of Sensation. University of Minnesota Press. 2003. Evans, Robert. The Projective cast. Ewing Charles, The New Scratchboard. Watson Guptill, New York. 2001 Ficacci, Luigi. Giovanni Battista Piranesi. Taschen. 2001 Greenberg Clement, Collage. *Art and Culture*. Boston. Beacon Press, 1961 Hooke, Robert. Micrographia, or some Physiological Descriptions of Minute Bodies made by Magnifying Glasses With Observations and Inquires thereupon. London. 1665. Jones, Owen. The Grammar of Ornament. London. 1856. Kwinter, Sanford. Confessions of an Organicist. *Log.* 2005 Kwinter, Sanford. "Landscapes of change" *Assemblage*, dec 1992. pp 50-65 Nicholson Ben. The Appliance House. MIT Press. 1990 Peterdi, Gabor, Printmaking: Methods Old and New. Macmillan Publishing. 1980 Reas, Casey & Fry Ben. *Processing A Programming Handbook for Visual Designers and Artists*. 2007. Rowe, Colin and Robert Slutzky. Transparency: Literal and Phenomenal" *Perspecta* 8 1963 Russo, Rhett, Repeat After Me, Return. Project 4 Gallery, Wild Bits Exhibition Catalog. 2006.
Dates:	Every Spring
Faculty Assigned:	Spring 2008 & 2009: Rhett Russo

Course Number: ARCH 726-401 Course Title: Contemporary Furniture Design
Course Number: ARCH 726-402 Course Title: Furniture Lab

Total Credits Awarded: 1 Course Units

Course Description: This course provides a platform to execute architectural, industrial & engineering principles at full scale. Case studies include mass production; material application, and human factors.

Course Goals & Objectives: Understanding in industrial design processes, contemporary furniture fabrication, and human factors

Student Performance Criterion:

Fulfills

2 Critical Thinking Skills
3 Graphics Skills
5 Formal Ordering Systems
6 Collaborative Skills
8 Western Traditions
9 Non-Western Traditions
11 Use of Precedents
12 Human Behavior
13 Human Diversity
15 Sustainable Design
24 Building Materials and Assemblies
25 Construction Cost Control
26 Technical Documentation
34 Ethics and Professional Judgment

Topical Outline:

2 wks Case Studies Research presentations	14%
3 wks Analog Modeling - full scale	22%
2 wks Analog Modeling – 1½" scale	14%
2 wks Design development	14%
5 wks Fabrication	36%

Prerequisites: IPD 403 or MEAM 512 for non-architecture majors

Textbooks / Learning Resources:

Dreyfuss, Henry. The Measure of Man & Women, Revised Edition, Human Factors in Design. John Wiley & Sons New York, 2002.
Form Magazine Fogelberg Karianne "Folded From the Flat" Feb. 2009, p86-90.
Reference
Postell, Jim. Furniture Design. John Wiley & Sons Hoboken New Jersey, 2007.
Bohm, Florian. KGID Konstantin Grcic Industrial Design, Phaidon New York, 2005.
Trudeau, N. Professional Modelmaking, Watson Guptill Publications New York, 1995.
Hudson Jennifer, 1000 New Designs and Where to Find Them, A 21st Century Sourcebook, Laurence King Publishers, China, 2006.
Klanten Robert & Lovell S. Eds. Furnish Furniture and Design for the 21st Century, Die Gestellen Verlag, Berlin, 2007.
Ottlinger, Eva. Gebrulder Thonet : Mobel aus gebogenem Holz. Bolhlau Wien 2003.

Dates Offered: Spring 2009

Faculty Assigned: Spring 2008 & Spring 2009: Katrin Mueller-Russo

Course Number: ARCH 727-401 Course Title: Industrial Design I

Total Credits Awarded: 1 Course Units

Course Description: This course will provide an immersion in the heritage, philosophies, thought processes, problem solving methodologies and creative form giving employed in the daily practice of Industrial Design.

Course Goals & Objectives:

1. To understand how Industrial designers (ID) create and develop concepts and specifications that optimize the function, value and appearance of products, systems and services for the benefit of both user and business / provider.
2. To be exposed to Industrial Design knowledge; a mixture of fine and commercial arts and applied sciences infuded with priorities that are focused firstly on the needs of the end user and functionality, then on market and manufacturing criteria.
3. To expose the class to ethnographic research, product problem solving, creative visual communication, ergonomics application, formal development in product scale, prototyping and manufacturing technologies.
4. Ideally this course will instill an understanding of Industrial Design as an integral function alongside Engineering and Marketing as one of the cornerstones of Integrated Product Design teams and will create an appreciation of the responsibilities incumbent upon all creative persons to build a sustainable society, while having fun and maintaining self respect.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
5 Formal Ordering Systems
6 Fundamental Design Skills
7 Collaborative Skills
12 Human Behavior
13 Human Diversity
14 Accessibility
15 Sustainable Design
27 Client Role in Architecture
34 Ethics and Professional Judgment

Topical Outline: Lectures 30%, Class discussion 20%, Studio & Critique 50%

Prerequisites: IPD 403 or equivalent

Textbooks / Learning Resources:

Tom Peters Essentials…Design , Tom Peters
Universal Principals of Design, Lidwell, Holden & Butler
Design of Everyday Things, Donald Norman
Geometry of design: Studies in Proportion and Composition, Kimberly Elam

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Peter Bressler

Course Number: ARCH 728/729-401 Course Title: Design of Contemporary Products

Total Credits Awarded:	1 Course Units
Course Description:	This course introduces students with design background in architecture, landscape architecture and engineering to design of contemporary products using a combination of seminar and workshop formats.
Course Goals & Objectives:	The goal of the course is to inspire innovation in product development. By capitalizing on product design theory and process, which encourages the integration of engineering and business concerns along with the experience of human interaction and emotive qualities, students are encouraged to re-think a utilitarian product by exploring beyond models promulgated by disciplines that focus more exclusively on either form or function.
Student Performance Criterion:	Fulfills 1 Speaking and Writing Skills 2 critical Thinking Skills 3 Graphic Skills 4 Research Skills 5 Formal Ordering Systems 6 Fundamental Design Skills 7 Collaborative Skills 11 Use of Precedents 12 Human Behavior 13 Human Diversity 26 Technical Documentation
Topical Outline:	The course uses a combination of seminar and workshop formats. The first half of each session presents aspects of the history, theory and practice of product design as it relates to the course. The second half of each session is dedicated to studio-based project development and/or research field trips.
Prerequisites:	ARCH 403/IPD 503
Textbooks / Learning Resources:	-The Evolution of Useful things, Petroski, Henry. Vintage - Antiques of The Future, Roberts, Lisa. Stuart, Tabori & Chang - Design Sketching. Olofsson, Erik. KEEOS Design Books - Product as Landscape. Hecht, Sam. Industrial Facility - Super Normal: Sensations of the Ordinary. Morrison, Jasper. Lars Muller - Naoto Fukasawa. Fukasawa, Naoto. Phaidon - KGID (Konstantin Grcic Industrial Design). Böhm, Florian. Phaidon - Designing Design. Hara, Kenya. Lars Muller
Dates Offered:	Spring 2009 & Fall 2009
Faculty Assigned:	Spring 2008 & Spring & Fall 2009: Josh Owen

Course Number: ARCH 731-001 Course Title: Experiments in Structure

Total Credits Awarded: 1 Course Units

Course Description: Physical modelling of the relationships between geometric space and tensile structures; deployable compressive polyhedra; and nteraction of tensile funicular polygons of revolution with compressive deployable polyhedra.

Course Goals & Objectives: Experiments using the hand (touch and force) and the eye (sight and geometry) during the construction and observation of physical models. Verbal, mathematical and computer models are used to compare results yielded by the physical model.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
3 Graphics Skills
4 Research Skills
5 Formal Ordering Systems
6 Fundamental Design Skills
7 Collaborative Skills
18 Structural Systems

Topical Outline:

1. Study of Le Ricolais' structural models and writings (20%)
2. Principles of deployable systems (20%)
3. Explanation and evaluation of TFPR systems (20%)
4. Explanation and evaluation of CDP systems (20%)
5. Evaluation of final model of combined TFPR and CDP (20%)

Prerequisites: ARCH 536-401 Structures

Textbooks / Learning Resources:

1. Writings of Professor McCleary on the work of Robert Le Ricolais
2. Writings of Dr. Alkhayer on deployable systems
3. Various articles on geometry and structural behavior

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Peter McCleary & Mohamad Al Khayer

Course Number: ARCH 732-001 Course Title: Building Systems Integration

Total Credits Awarded: 1 Course Units

Course Description: This course explores the interrelationships of environmental control systems by means of building type studies. Innovative systems are emphasized. Projects such as residential, educational and commercial buildings, office and assembly buildings are analyzed in details. The main principles of "integrated building design" are illustrated and studied. The relationship between energy conservation and the principles of initial building cost versus life cycle costs are also discussed.

Course Goals & Objectives: Provide a comprehensive understanding of the fundamentals of “well integrated buildings/high performance buildings” and utilize physical and computational tools to investigate energy conservations in buildings.

Student Performance Criterion:

Fulfill	Partially Fulfill
15 Sustainable Design	4 Research Skills
17 Site Conditions	12 Human Behavior
19 Environmental Systems	20 Life Safety Systems
22 Building Service Systems	21 Building Envelope Systems
	22 Building Material and Assemblies
	27 Client Role in Architecture

Topical Outline:

Systems (25%)
- HVAC – Equipment
- HVAC – Distribution

Analysis and Code (15%)
- Mapping Building Parameters and Physical Testing –Theory and hands-on exercises
- Energy Code Compliance, Economics of Energy Conservation: Cost Trade-offs and Life-cycle Analysis

Integration (60%)
- Passive and Active Solar Systems Integration
- Computational Assessments/Thermal and Light simulation tools for integration

Prerequisites: ARCH 534

Textbooks / Learning Resources: Readings material and all lectures are placed on the course web (blackboard - www.courseweb.uipenn.edu)

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Ali Malkawi

Course Number: ARCH 734-001 Course Title: Ecological Architecture

Total Credits Awarded: 1 Course Units

Course Description: This course explores the evolving approaches to ecologically considered architectural design. Taught by a practicing architect, the course features guest lecturers from a variety of design disciplines.

Course Goals & Objectives:
1. Understand how environmental concerns of resource efficiency, stormwater, habitat disruption, energy and water conservation effect the design of buildings?
2. Understand how designers can address indoor environmental quality issues such as indoor air quality, mold, and other public health concerns.
3. Understand how to track the ecological scale effects of architectural design.
4. Understand how to measure progress towards more environmentally responsible design?
5. Understand how other design disciplines, such as landscape architects, civil engineers, and solid waste specialists are integrated into the design process for environmentally responsible architecture.

Student Performance Criterion:

Fulfills
2 Critical Thinking Skills
4 Research Skills
7 Collaborative Skills
15 Sustainable Design

Topical Outline:

Overview of Ecological Architecture	10%
Energy, Climate Change & Buildings	15%
Materials Selection & Life Cycle Analysis	10%
Metrics for Green Design	10%
Site Impacts and Water	15%
Economics and the Business Case for Green Buildings	10%
Integrating Green Design into Architecture and Practice	20%
Emerging Issues and Pushing the Envelope	10%

Prerequisites: None

Textbooks / Learning Resources: Readings selected by instructor, including chapters from Ecological Design by van der Ryn & Cowan plus selected articles by Suzannah Hagen, Wendell Berry, Ed Mazria, Nadav Malin, Ian McHarg, William Reed, Greg Kats, Rocky Mountain Institute, Stewart Brand, Scot Horst, Ian Abley and Muscoe Martin.

Dates Offered: Every Spring

Faculty Assigned: Spring 2007 & 2008: Muscoe Martin

Course Number: ARCH 739-401 Course Title: Building Pathology

Total Credits Awarded: 1 Course Unit

Course Description: *Building Pathology* examines building deterioration and its mechanisms and causative factors in order to inform design of new buildings, adaptive reuse of existing buildings, and preservation of historic buildings.

Course Goals & Objectives:

Upon completion of the course, students should be able to:
Understand how to achieve & maintain adequate utility, durability & functional performance in buildings;
Recognize building materials for their vulnerabilities to deterioration, as well as for their performance assets and durability;
Know the primary mechanisms of deterioration in buildings, the factors necessary & sufficient for these mechanisms to occur, & the potential for synergistic interaction between different mechanisms;
Take a systemic approach the problem of building deterioration, with emphasis on mechanisms & enabling factors, rather than symptomatic evidence;
Define the objectives & identify and evaluate intervention strategies to mitigate, remedy or prevent deterioration;
Think critically about deterioration & durability in design of buildings;
Prepare a professional-quality report applying the course to an actual building.

Student Performance Criterion:

Fulfill	Partially Fulfill
1 Speaking and Writing Skills	18 Structural Systems
2 Critical Thinking Skills	19 Environmental Systems
3 Graphics Skills	21 Building Envelope Systems
4 Research Skills	22 building Service Systems
7 Collaborative Skills	23 building systems Integrations
8 western Traditions	24 Building Materials and Assemblies
10 National and Regional Traditions	25 Construction Cost Control
15 Sustainable Design	27 Client Role in Architecture
17 Site Conditions	

Topical Outline: Pathology & durability (5%); use & adaptation (5%); materials properties & vulnerabilities (15%); climate, soils & groundwater as factors in deterioration (15%); thermal energy & moisture transport in buildings (15%); mechanisms of deterioration (20%); structure, enclosure & services (15%); diagnostics & monitoring (10%).

Prerequisites: BArch minimum or equivalent. Second semester, first year graduate level status

Textbooks / Learning Resources:

Harris, Samuel Y. *Building Pathology – Deterioration, Diagnostics and Intervention*. New York, NY: John Wiley & Sons, Inc, USA, 2001.

Brand, Stewart. *How Buildings Learn – What Happens After They're Built*. New York, NY: Viking, Penguin Books, USA, 1994.

Watt, David S. *Building Pathology, Principles and Practice*, 2nd Edition. Oxford, UK: Blackwell Publishing Ltd, 2007.

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Michael C. Henry

Course Number: ARCH 741-001 Course Title: Architectural Design Innovation

Total Credits Awarded: 1 Course Units

Course Description: This seminar explores *systemic thinking* and *digital design techniques* that yield *archit forms* that have *innovative* aspirations.

Course Goals & Objectives:
Digital Concepts
Mastery of Digital Techniques
Development of Aesthetic Sensibility

Student Performance Criterion:

Fulfill	
1 Speaking and Writing Skills	5 Formal Ordering Systems
2 Critical Thinking Skills	6 Fundamental Design Skills

Topical Outline:

1. Systemic Thinking for Digital Design includes techniques and technology, temporality ar virtual and actual, affects and effects, elegant forms, new technologies and future techniques. these themes will be explored in a separate seminar meeting, and the relationships between th unfold through the progression of the seminar.

2. Design Techniques that potentially yield an aesthetic for architecture through guest lect Hernan Diaz Alonso, Patrik Schumacher and Jesse Reiser with particular focus on part to relationships, spatial qualitative differences and color.

3. Innovation will explore the formal ramifications of digital design techniques on organiz programmatic, spatial and material arrangements. Of particular interest will be architecture and the ability for a more integrated design approach.

Prerequisites: ARCH 601 or Permission of Instructor

Textbooks / Learning Resources:
Reading List
Discussions
Guest Lectures

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Ali Rahim

Course Number: ARCH 741-002 Course Title: Experiments in Design Techniques

Total Credits Awarded:	1 Course Units
Course Description:	This course explores new design techniques from a number of sources including advances in digital technology, geometry and material practices in allied arts, crafts and design disciplines.
Course Goals & Objectives:	Computer Aided Design and Textile Tectonics Algorithms and Textile Tectonics Surface Types and Surface Transformations Tensegrity Structures and 3D Textures Responsive Membranes and Smart Materials Biology and Textile Tectonics: Material and Feedback Fabric Architectures Subdivision Surfaces Diagrids and woven superstructures
Student Performance Criterion:	Fulfill 3 Graphic Skills 4 Research Skills 6 Fundamental Design Skills 7 Collaborative Skills 24 Building Materials and Assemblies
Topical Outline:	Graphic Skills: 10% Research Skills: 10% Fundamental Design Skills: 50% Collaborative Skills: 10% Building Materials and Assemblies: 20%
Prerequisites:	ARCH 601 or Permission of Instructor
Textbooks / Learning Resources:	Architectural Geometry by Pottmann, Asperl, Hofer and Kilian, Bentley Institute Press Extensible Computational Design Tools by Robert Aish Design by Algorithm by Chris Williams Instrumental Geometry by Hugh Whitehead Extreme Textiles, A transformed Architecture by M. McQuaid PennDesign Scripting Group, chaired by Sabin
Dates Offered:	Every Spring
Faculty Assigned:	Spring 2008 & 2009: Jenny Sabin

Course Number: ARCH 743-001 Course Title: Form and Algorithm

Total Credits Awarded:	1 Course Units
Course Description:	This seminar will investigate the generation of form from non-linear complex systems. This research will interrogate how architectural intention can operate at a local level and through the interaction of low level rules systemic geometries emerge.
Course Goals & Objectives:	Students will investigate the unit (cell, bit, module) and its relationship to the whole (body, program, building) and its environment within the context of generative and algorithmic design. Students will develop an understanding of non-cartesian, non-linear geometries and forms, from their inception and conceptualization to their realization in the form of space, program, circulation and structure. It will show the organization of new forms of structure, demonstrating how these models can operate at various scales and levels in the built environments. The seminar will illustrate the power of numbers and number systems as means of generating form and structure. It will explain how new geometries and forms are generated through the use of tools demonstrating how these tools are important instruments of design.
Student Performance Criterion:	Fulfill 2 Critical Thinking Skills 3 Graphics Skills 5 Formal Ordering Systems 6 Fundamental Design Skills 7 Collaborative Skills
Topical Outline:	1. Recursive form (30%) 2. Conditional recursion (30%) 3. Agent code (20%) 4. Evolution of form (20%)
Prerequisites:	None
Textbooks / Learning Resources:	www.kokkugia.com/wiki - providing research links and tutorial resources.
Dates Offered:	Every Fall
Faculty Assigned:	Fall 2008: Cecil Balmond & Roland Snooks Fall 2007: Cecil Balmond & Justin Diles

Course Number: ARCH 744-401 Course Title: Digital Fabrication
Course Number: ARCH 744-402 Course Title: Digital Fabrication

Total Credits Awarded: 1 Course Units

Course Description: This course investigates the fabrication of digital structures through the use of rapid prototyping and computer-aided manufacturing technologies.

Course Goals & Objectives:
1. Parametrically controlled modeling
2. Multi-directional work flow
3. Material Analysis and feedback
4. Research in fabrication technology
5. Development of fabrication techniques
6. Model(s) fabrication

Student Performance Criterion:
Fulfill
2 Critical Thinking Skills
4 Research Skills
18 Structural Systems
21 Building Envelope Systems
24 Building Materials and Assemblies

Topical Outline:
Pluripotent and Adaptive Structures
- Parametrically controlled modeling (30%)
- Material Analysis and feedback (10%)
- Research in fabrication technology (10%)
- Development of fabrication techniques (30%)
- Model(s) fabrication (20%)

Prerequisites: ARCH 601 or Permission of Instructor

Textbooks / Learning Resources: None

Dates Offered: Spring 2009

Faculty Assigned:
401: Spring 2008 & 2009: Ferda Kolatan
402: Spring 2009: David Ruy

Course Number: ARCH 745-001 Course Title: Nonlinear Systems Biology & Design

Total Credits Awarded:	1 Course Units
Course Description:	Systems biology examines the nature of nonlinearities, emergent properties and loosely coupled modules that are the hallmarks of 'complexity'. This course makes use of new models and tools abstraced from systems biology for research and design in architecture.
Course Goals & Objectives:	The elective is composed of a sequence of discussions and workshops based upon a detailed understanding of systems biology, and corresponding explorations in generative design and experimental fabrication in architecture. The course will be augmented with lab meetings at the Institute for Medicine & Engineering (IME), readings and field trips to inter-disciplinary research laboratories at The University of Pennsylvania. A hands-on LabStudio will take place in which students will generate and analyze biological data. Parallel studies in digital modeling and fabrication will explore sub-topics, including: 1. Epigenesis, 2. Nanofabrication, and 3. Four-dimensional cell and tissue systems. Workshops will include instruction in scripting techniques for the generation of parametric and associative models in Generative Components and Rhinoceros. Each student will be responsible for generating digital models, fabricating physical models, as well as the production of a project report replete with metrics, images and text. All students enrolled in the course will have exclusive and sole access to a new Z-corp 510 3D color printer. Printing media will be provided gratis.
Student Performance Criterion:	Fulfills 3 Graphic Skills 4 Research Skills 5 Formal Ordering Systems 6 Fundamental Design Skills 7 Collaborative Skills
Topical Outline:	Graphic Skills: 10%; Research Skills: 20%; Formal Ordering Systems: 20% Fundamental Design Skills: 40% Collaborative Skills: 10%
Prerequisites:	ARCH 601 or Permission of Instructor
Textbooks / Learning Resources:	Camazine S., Self-Organization in Biological Systems, Princeton Studies in Complexity, 2003 Carroll, Sean B., Endless Forms Most Beautiful, Norton, New York City, 2006 Di Cristina, Giuseppa. Ed. Architecture and Science, AD, Wiley-Academy, 2001 Estevez, Alberto Ed., Genetic Architectures. Escola Tecnica Superior d'Arquitectura. 2003 Turner, J. Scott, The Tinkerer's Accomplice, How Design Emerges From Life Itself, Harvard College, 2007 Scripting Manual by Jenny E. Sabin RhinoScript Manual by David Rutten GC manual by Axel Kilian, Roly Hudson and Jeff Brown http://www.rhino3d.com/developer.htm http://www.programurl.com/software-context-downloadnow.html http://msdn.microsoft.com/library/default.asp?url=/library/en-us/script56/html/vtorivbscript.asp http://processing.org/reference/libraries
Dates Offered:	Every Fall
Faculty Assigned:	Fall 2007 & 2008: Jenny Sabin & Peter Jones

Course Number: ARCH 762-001 Course Title: Design and Development

Total Credits Awarded: 1 Course Unit

Course Description: An introduction to the relationship between architectural design and real estate development: housing, commercial buildings, adaptive reuse, downtown development, mixed-use projects, and planned communities.

Course Goals & Objectives: Since the majority of students are non-architects (planners, MBAs, real estate majors) an important objective is to introduce them to architectural design, basic concerns of architects, terminology, historical precedents.

Student Performance Criterion:

Fulfills

1 Speaking and Writing Skills
2 Critical Thinking Skills
4 Research Skills
7 Collaborative Skills
11 Use of Precedents
12 Human Behavior
24 Building Materials and Assemblies
25 construction Cost Control
27 Client Role in Architecture
28 Comprehensive Design

Topical Outline:

Weeks 1-5: Fundamentals, including design issues, style, construction.
Weeks 6-8: Housing
Week 10: Retail environments
Week 11: Multi-family & downtown development
Week 12: New development models & mixed use
Week 13: Adaptive reuse & planned communities
Weeks 14-16: Student presentations of team case studies

Prerequisites: None

Textbooks / Learning Resources: Texts: A coursepack iof readings s available from Wharton Reprographics. The required course text is Witold Rybczynski, *Last Harvest* (Scribner, paperback, 2007). Class slide presentations available on-line.

Dates Offered: Spring 2008 & 2009

Faculty Assigned: Spring 2008 & 2009: Witold Rybczynski

Course Number: ARCH 765-001 Course Title: Project Management

Total Credits Awarded: 1 Course Units

Course Description: This course is an introduction to the techniques and tools of managing the design and construction of large, and small, construction projects. Topics include project delivery systems, Construction Management, Project Management, Design/Build, General Contracting, Owner's Representation, management tools, cost-control and budgeting systems, professional roles, and contracting. Case studies serve to illustrate applications. Cost estimating and critical path schedule control systems are also reviewed and discussed.

Course Goals & Objectives: Understanding of various construction project delivery systems; roles, responsibilities and Contacts; risks and risk mitigation; estimating and scheduling.

Student Performance Criterion:

Fulfills	
1 Speaking and Writing Skills	30 Architectural Practice
2Critical Thinking Skill	32 Leadership
12 Human Behavior	33 Legal Responsibilities
25 Construction Cost Control	34 Ethics and Professional Judgment
27 Client Role in Architecture	
29 Architect's Administrative Role	

Topical Outline:
Definitions 8%
Project Delivery Systems 22%
Roles of all Players 15%
Responsibilities 15%
Contracts 22%
Estimating and Scheduling 8%
Techniques for Excellent Project Management 10%

Prerequisites: Diverse undergraduate education, very basic knowledge of business, real estate and construction, and good writing, speaking, and critical thinking skills.

Textbooks / Learning Resources:
Construction Project Management (5th edition) – Sears, Sears & Clough
Managing Project Risk – Atkins & Simpson
BIM and Construction Management – Hardin
Design-Build – Thomas
Architect's Essentials of Negotiation - Abramowitz

Dates Offered: Every Fall

Faculty Assigned: Fall 2007 & 2008: Charles Arena

Course Number: ARCH 768-401 Course Title: Real Estate Development
Course Number: ARCH 768-402 Course Title: Real Estate Development

Total Credits Awarded: 1 Course Unit

Course Description: ARCH-768 examines the development process for multiple real-estate product types. Topics include market analysis, site acquisition, entitlements, site planning, construction, financing, leasing, management and disposition. Course combines predominantly case discussion with lectures, team assignments and project tours.

Course Goals & Objectives:
1. Become better decision-makers and real estate industry leaders
2. Understand and assess the risks in real estate development and investments
3. Be more productive in your first job
4. Familiarize yourself with the real estate development process

Student Performance Criterion:

Fulfill	
1 Speaking and Writing Skills	24 Building Materials and Assemblies
2 Critical Thinking Skills	25 construction Cost Control
4 Research Skills	27 Client Role in Architecture
7 Collaborative Skills	32 Leadership
11 Use of Precedents	34 Ethics and Professional Judgment

Topical Outline:
Real Estate Development – case discussion and lectures: 75%
Running a Real Estate business and leadership: 10%
Project Tours: 15%

Prerequisites:
REAL/FNCE 721: Real Estate Investment: Analysis and Financing
REAL/LGST 804: Real Estate Law

Textbooks / Learning Resources:
Coursepack: selected cases
Professional Real Estate Development by Peiser

Dates Offered: Fall 2008 and Spring 2008

Faculty Assigned:
401: Spring 2008: Asuka Nakahara, Fall 2008: Kevin Donohoe
402: Spring 2008 & 2009: Jonathan Weller

Course Number: ARCH 772-001 Course Title: Professional Practice III

Total Credits Awarded:	1 Course Units
Course Description:	The third in a sequence in professional practice and procedures in architecture.
Course Goals & Objectives:	The course focuses on the nature of projects in the context of activities within an architect's practice and on the idiosyncrasies of managing multiple projects. Detailed studies of the legal, financial, marketing, management and administration issues associated with the different forms of office proprietorship are studied. The special set of contractual and ethical obligations of the architect, particularly in response to client needs and safety, are examined. Codes, standards and regulations and their relationship to the different activities in the practice of architecture are presented.
Student Performance Criterion:	**Fulfill** 1 Speaking and Writing Skills 2 Critical Thinking Skills 25 Construction Cost Control 27 Client Role in Architecture 29 Architect's Administrative Roles 30 Architectural Practice 31 Professional Development 32 Leadership 33 Legal Responsibilities 34 Ethics and Professional Judgment **Partial Fulfill** 7 Collaborative Skills
Topical Outline:	The Nature of Practices The Economics of Architectural Practice Project & Practice Management Structures and Processes AIA Contract Documents Review/Role of the Architect. Contract Administration Contractual Obligations of the Architect "Licensure and your Career" Negotiating Strategies – The Value Proposition Introduction to Risk Management - Liability Litigation and Insurance Building Codes and Regulations Public Relations and Marketing Social Moral and Ethical Obligations of the Architect Starting Your Own Practice The Leadership Mandate: Expectations of the Architect
Prerequisites:	ARCH 671 & 672
Textbooks / Learning Resources:	The Architect's Handbook of Professional Practice, Student Edition. The American Institute of Architects, 13th Edition
Dates Offered:	Spring
Faculty Assigned:	Spring 2008 & 2009: David McHenry, AIA LEED AP

Course Number: ARCH 780-001 Course Title: Architecture in the Schools

Total Credits Awarded:	0.5 Course Units
Course Description:	AIE: Architecture In Education, a program of teaching architecture in Philadelphia area schools. Students work with a classroom teacher and another design professional or student to develop a weekly series of eight (1-1/2 hour) interdisciplinary experiential lessons using the built environment as a laboratory to create stimulating new ways of seeing, learning, and doing.
Course Goals & Objectives:	Learning to understand and communicate fundamentals about architecture and the built environment.
Student Performance Criterion:	Fulfill 05 Formal Ordering Systems 06 Fundamental Design Skills 07 Collaborative Skills 08 Western Traditions 09 Non-Western Traditions 10 National & Regional Traditions 11 Use of Precedents 12 Human Behavior 13 Human Diversity
Topical Outline:	Group organizational meeting. Individual lesson preparation meetings. Eight weekly sessions of 1 ½ hours Wrap up meeting and discussion. Submission of teaching notebook.
Prerequisites:	none
Textbooks / Learning Resources:	No textbook, but materials from 20+ years of teaching. www.aiaphila.org/aie http://www.aiaphila.org/aie/new-stuff/resources/resources.html
Dates Offered:	Every Semester
Faculty Assigned:	Fall 2007, Spring & Fall 2008 & Spring 2009: William Braham

4.4 Faculty Resumes

Al Khayer, Mohamad — Lecturer

Courses Taught:	Fall 09	ARCH 731-001 Experiments in Structure
	Spring 09	ARCH 632-001 Deployable Structures
	Fall 08	ARCH 631-001 Technology Case Studies I
	Spring 08	ARCH 632-001 Deployable Structures
Educational Credentials:	2007	PhD Arch, University of Pennsylvania
	1998	M Arch, Pratt Institute
	1994	B Arch, Tishreen University
Teaching Experience:	2000-prsnt	Lecturer, University of Pennsylvania
	1998	Lecturer, Cambridge University, Cambridge, UK. Lecturer
Professional Experience:	2009	Nelson Mandela's Children Hospital (Competition finalist)
	2009	King Fahd Specialty Referral Oncology Hospital Dammam, Saudi Arabia
	2008	Dar Al Fouad Hospital (Cairo, Egypt. Under construction)
	2008	Kings County Hospital 300 beds (Construction completed)
	2007	SkyRidge luxury residence in Aspen (Construction completed)
	2007	Rashid Hospital in Dubai 600 beds (Competition finalist)
	2007	Private Luxury residence (Landmark on 72nd street NYC under construction)
	2007	Interventure Headquarter offices on Third Ave. New York, NY.
Licenses / Registration		None
Selected Publications:	2008	Thesis Book: DEPLOYMENT OF TRUSSED STRUCTURES Generation of Deductive Taxonomy of unfolding Configurations.
	2006	Le nuove specie dell`architettura / The New Species of Architecture. John M. Johansen /The Office for Nano Architecture. l'ARCA 210. L'ARCA International, Milan, ITALY. (Jan 2006).
Professional Memberships:		None

Arena, Charles		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 765-001 Project Management ARCH 765-001 Project Management
Educational Credentials:	1976 1971	M. Arch, University of Pennsylvania B.A., Yale University
Teaching Experience:	1998-prsnt	Lecturer, School of Design, University of Pennsylvania
Professional Experience:	1971-76 1976-77 1978-79 1979-81 1981-prsnt	Construction Project Manager., Estimator, Scheduler - ICI Architect – Bower, Lewis, Thrower Architects Construction Administrator – ICI Mid-Atlantic Regional Dir. Constr./Estim./Sched.–Heery Intrntnl. Founder&Pres.-The Arena Companies-Constr.Mngmt./Project Mngmt./Owner'sRep./Constr.ClaimsPrep./Estim./Sched
Licenses / Registration		Licensed General Contractor and Construction Manager in Pennsylvania, Delaware, New Jersey & Maryland
Selected Publications:		None
Professional Memberships:		Amer. Assoc. Cost Engineers (AACE) - past Project Mngmt. Institute (PMI) - past

Ashraf, Kazi Khaleed		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 712-007 Designing Asia
Educational Credentials:	2002 1989 1983	PhD Arch, University of Pennsylvania SMArchS, MIT B.Arch, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.
Teaching Experience:	2001-prsnt 1997-prsnt 1990-2001	Associate Professor, University of Hawaii Lecturer, Department of Architecture and History of Art, University of Pennsylvania Lecturer, Temple University, Pratt Institute
Professional Experience:	1990-prsnt	Selected private practice
Selected Publications	2008 2007 2002 1997	"The Buddha's House, RES, Fall Issue. "Made in India," Architectural Design. Sherebanglanagar: Louis Kahn and the Making of a Capital Complex, Loka. "An Architecture of Independence: The Making of Modern South Asia," Architectural League of New York and Princeton Architectural Press.
:	2007 2002 1997 1997 1994	*Made in India,* Special Issue of *Architectural Design* (John Wiley). *Sherebanglanagar: Louis Kahn and the Making of a Capital Complex* (with Saif Ul Haque), (Loka Publications). *An Architecture of Independence: The Making of Modern South Asia* (with James Belluardo), on the work of Charles Correa, Balkrishna Doshi, Muzharul Islam and Achyut Kanvinde (The Architectural League of New York with Princeton Press). *Pundranagar to Sherebanglanagar: The Architecture of Bangladesh* (with S. Haque and R. Ahsan), (Chetana, Dhaka). *Louis I. Kahn: National Capital Complex of Bangladesh* (GA Edita Publications, Tokyo).
Professional Memberships:		Member, Editorial Board, Journal of Architectural Education Member, Advisory Committee, The Doris Duke House, Honolulu

Balmond, Cecil — Practice Professor

Courses Taught:	Fall 09	ARCH 743-001 Form and Algorithm
	Spring 09	ARCH 704-204 Research Studio
	Fall 08	ARCH 743-001 Form and Algorithm
	Spring 08	ARCH 704-204 Research Studio
Educational Credentials:	1970	MsS and Diploma in Concrete Studies, Imperial College of Science, London
	1965	B.S.C. Civil Engineering, University of Southamption, England
Teaching Experience:	2004-	University of Pennsylvania, Paul Philippe Cret Professor
	2000	Harvard University, Visiting Kenzo Tange Critic
	2003-4	London School of Economics, Lecturer
	1997-2002	Yale University, Visiting Saarinen Professor
	1987-1995	Stadelschule, Frankfurt, Visiting Professor
		Architectural Association London, External Examiner
Professional Experience:	1968	Founder and Director of Advanced Geometry Unit, Arup
	2005	Executive Director, Nonlinear Systems Organizations (NSO)
Licenses / Registration		Professional Engineer
Selected Publications:	2008	Frontiers of Architecture*, Louisiana Museum of Modern Art by Poul Erik Tojner*
		Rem Koolhaas and Cecil Balmond Serpentine Gallery Pavilion, Serpentine Gallery Pavilion
	2007	*Element*, Prestel, London
		Informal, Prestel, London
	2006	*A+U [Architecture and Urbanism]*, A+U Publishing, Tokyo
	2005	*Tooling*, Princeton Architectural Press, Princeton
Professional Memberships:	2009	Honorary Fellow of the Institution of Engineering Designers
	1998	A+U Advisory Committee
	1992	Honorary Fellow of the Royal Institute of British Architects
	1984	Honorary Architectural Association Diploma
	1970	Chairman, European Steel Design Education Program
		Member of the Institution of Structural Engineers

Beckman, Julie — Lecturer

Courses Taught:	Fall 09	ARCH 501-202 Design Studio I
		LARP 543-003 Media III
	Spring 09	ARCH 502-201 Design Studio II
	Fall 08	ARCH 501-202 Design Studio I
	Fall 08	LARP 543-002 Media III
	Spring 08	ARCH 502-201 Design Studio II
Educational Credentials:	2001	M. Arch, Columbia University, GSAPP
	1995	BA, Bryn Mawr College, Growth & Structure of Cities
Teaching Experience:	S'06–prsnt	Lecturer, University of Pennsylvania, PennDesign
	2004-05	Lecturer, Catholic University of America, Washington DC
Professional Experience:	2002-Pres	KBAS LLC, Philadelphia, PA
	2002-03	Stephen Tilly, Architect, Dobbs Ferry, NY
	2001-02	Delacour & Ferrara Architects, Brooklyn, NY
Licenses / Registration		None
Selected Publications:	2009	AD, Wiley, Vol. 79, pp 70-75
	2008	Details in Contemporary Landscape Architecture, Laurence King, Ltd, pp 130-133
	2008	Via: Occupation, Univ of Pennsylvania Press, Vol. 1, pp 59-64
	2007	Models, 306090, Inc., Vol. 11, pp 156-160
	2006	Young Architects 8: Instability, Princeton Architectural Press, pp 46-71.
Professional Memberships:		None

Bernecker, Craig		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 638-005 Lighting ARCH 638-005 Lighting
Educational Credentials:	1989 1978 1975	PhD, Psychology, Penn State University MS, Architectural Engineering, Penn State University B.A., Psychology, Muhlenberg College, Allentown, PA
Teaching Experience:	2008-prsnt 2006--prsnt 1995-2001 1989-1995 1981-1989 1976-1978	Lecturer, University of Pennsylvania Part-time Faculty, MFA Lighting Design, Department of Architecture, Interior Design, and Lighting, Parsons the New School for Design, New York, NY Associate Professor of Architectural Engineering and Robert J. Besal Professor of Illumination Engineering, Department of Architectural Engineering, The Pennsylvania State University, University Park, PA Assistant Professor of Architectural Engineering and Director of Illumination Studies, Department of Architectural Engineering, The Pennsylvania State University, University Park, PA Instructor in Architectural Engineering and Director of Illumination Studies, Department of Architectural Engineering, The Pennsylvania State University, University Park, PA Graduate Research Assistant, Department of Architectural Engineering, The Pennsylvania State University, University Park, PA
Professional Experience:	2002-prsnt 1981-prsnt 1999-2001 1980-1981 197/8-1980	Founder, Lighting Education Institute (LEI), Philadelphia, PA Architectural Lighting Consultant (Lighting Certified), State College and Exton, PA Executive Director, The Albright-Penn State Partnership, Albright College and Penn State Berks-Lehigh Valley College, Reading, PA; Penn State University, University Park, PA Project Coordinator, Peerless Lighting Corporation, Berkeley, CA Illumination Engineer/Project Electrical Engineer, The Balinger Company, Architects and Engineers, Philadelphia, PA
Licenses / Registration		None
Selected Publications:	2007	Lifelong Learning for Lighting. *Lighting Design + Application*. 37(6):24-27.
Professional Memberships:	1978-prsnt 1983-prsnt 1994-prsnt	Illuminating Engineering Society (IESNA) International Commission on Illumination (CIE) International Association of Lighting Designers

Braham, William — Associate Professor

Courses Taught:	Fall 09	ARCH 713-001 Ecology Technology and Design
		ARCH 780-001 Architecture in the Schools
	Spring 09	ARCH 534-401 Environmental Systems II
		ARCH 780-001 Architecture in the Schools
	Fall 08	ARCH 780-001 Architecture in the Schools
	Spring 08	ARCH 534-401 Environmental Systems II
		ARCH 602-001 Design Studio: Net Zero
		ARCH 780-001 Architecture in the Schools
Educational Credentials:	1995	• PhD Arch, University of Pennsylvania
	1983	• M.Arch, University of Pennsylvania
	1979	• B.S.E. Civil & Environmental Engineering, Princeton University
		•
Teaching Experience:	2001-prsnt	Associate Professor, with tenure (2001-); Assistant Professor
	2007	(1995-2001); Lecturer (1989-1995), Department of Architecture, University of Pennsylvania
		Paul L. Cejas Scholar. Florida International University, Miami
Professional Experience:	1999	Design Consultant, Ivalo Lighting-Lutron Electronics
		Principal, Studio Luxe: Architecture and Illumination
	1995-2006	Director, Center for Environmental Design and Planning, GSFA, University of Pennsylvania
	1983-91	Associate, Buttrick White & Burtis Architects, NY, NY
	1978-80	Designer/Analyst, Harrison Fraker Architects/Princeton Energy Group, Princeton, NJ
Licenses / Registration	1985-	Architectural Registration: Pennsylvania, New York (inactive), and NCARB
Selected Publications:	2009	Scale, Dimension, & Measure in Environmental Design (Routledge)
	2008	Scenarios for Carbon Neutrality, Univ. of Penn. Co-PI. TC Chan
	2007	Center
	2006	"OfficeLand: History, Ecology, and the Plant-in-the-office." VIA: *Rethinking Technology: A Reader in Architectural Theory.* (London:
	2004	Routledge).
		Penn Sustainability Plan, Phase I, 2005-2006. TC Chan
		"Biotechniques: Remarks on the Intensity of Conditioning." in Performative Architecture. Edited by Ali Malkawi and Branko Kolarevic (Spon Press).
Professional Memberships:	1985-	American Institute of Architects (AIA), Philadelphia Chapter
	2006-	AIA College of Fellows
	2003	American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE)
	1997-2001	International Association of Lighting Designers (IALD, Educ.)
	1992-	Society of Building Science Educators (SBSE)

Bressler, Peter, FIDSA — Adjunct Associate Prof (SEAS)

Courses Taught:	Fall 09	ARCH 727-401 Industrial Design I
	Spring 09	EAS 449 /IPD 549 Product Design for Entrepreneurial Ventures
	Fall 08	ARCH 727-401 Industrial Design I
Educational Credentials:	1968	Rhode Island School of Design, BFAID, 1968
	1972	Synectics Certification, Philadelphia, PA
	2008	Certification: Design Patent Expert Witness Seminar, IDSA
Teaching Experience:	2006 TP	Adjunct Associate Professor, University of Pennsylvania
	2005	Adjunct Associate Professor, Philadelphia University
	2001	Visiting Lecturer, University of the Arts
	2000	Adjunct Associate Professor, Lehigh University
	1983	Visiting Lecturer, Rhode Island School of Design
	1972	Instructor, Philadelphia College of Art
Professional Experience:	1998 TP	Founder and Chair, Solar Roofing Systems, Inc. T/A SRS energy
	1972 TP	Founder and Chair, Bresslergroup, Inc....A 22 person design research, strategic product planning, industrial design, product development and engineering consulting firm. Noted by *Businessweek* magazine as "one of the top award winning firms".
	1973-74	Contracted consultant to the Franklin Institute Research Laboratories, founded "Center for the Enhancement of the Capabilities of the Handicapped."
Selected Publications: (Invited Speaking)		IDSA National Conferences (8) IDSA Regional Conferences (12) EIDO, Toulon, France TAIDI, Taipei, Taiwan (2) ICSID 89, Nagoya, Japan USIA, Yugoslavia
Professional Memberships:		Industrial Designers Society of America, member 1973 – present Appointed to Fellowship (FIDSA) 1990 Design Foundation, Board Chair '91-92 National President '89-90, Board Chair '91-92 Board of Directorship, 1976-2001 Chapter Officer 1974-1980
Prizes and Awards:		Industrial Designers Society of America Excellence in Design Awards Appliance Manufacturer's EID Awards International Design Magazine Awards Japanese G Mark Awards German IF Hanover Awards Chicago Athenaeum Good Design Awards Consumer Electronics Innovation Awards Krupps international Design Competition
		Bressler has personally authored or co-authored over 75 US & International Design and Utility Pa

Capaldi, Charles		Lecturer
Courses Taught:	Fall 09	
	Spring 09	ARCH 672-001 Professional Practice II
	Fall 08	
	Spring 08	ARCH 672-001 Professional Practice II
Educational Credentials:	1980	M. Arch, Columbia
	1975	BA, University of Pennsylvania
Teaching Experience:	2007-prsnt	Lecturer, University of Pennsylvania
Professional Experience:	1994-	Principal, B Five Studio Architects
	1984-94	Associate, GBQC Architects
	1980-84	Carles Enric Vallhonrat,Architect
Licenses / Registration		NCARB
		Registered Architect: PA, NY, NJ
Selected Publications:		Recent Projects:
	2009	NBME Headquarters, Philadelphia
	2008	The Durst Organization Headquarters, New York
	2009	Van Pelt Street Residence, Philadelphia
Professional Memberships:		AIA
		NCARB
		LEED Certified

Castillo, Jose — Lecturer

Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 711-001 Spaces of Tourism ARCH 711-001 Spaces of Tourism
Educational Credentials:	2000 1995 1993	Doctor of Design, Harvard Graduate School of Design MArch, Harvard Graduate School of Design BArch, Universidad Iberoamericana, Mexico City
Teaching Experience:	2007-prsnt 2000-2009 2006 2002	Lecturer, University of Pennsylvania's School of Design Professor of Architecture and Urbanism, Universidad Iberoamericana's School of Architecture, Mexico Visiting Professor of Architecture, Tulane University Visiting Professor of Architecture, Polytechnic University of Puerto Rico
Professional Experience:	2002-2009 2000-2002	Founder & Co-Principal, arquitectura 911sc Principal, Futura Desarrollo Urbano
Licenses / Registration	1993	Registered Architect, Mexico
Selected Publications:	2009 2008 2008 2006	An interview with Smiljan Radjic in BOMB No. 106, Winter 2009 After the Crisis, in The Endless City, published by Phaidon Mexico Operative System, in 2G Dossier Iberoamerica Casa Marbrisa by John Lautner, in La Casa Latinoamericana Moderna published by Gustavo Gili
Professional Memberships:	2005-prsnt	Member of the Colegio de Arquitectos, (Local equivalent of AIA)

Cavallero, Alberto — Lecturer

Courses Taught:	Fall 09	
	Spring 09	ARCH 638-002 Building Skins
	Fall 08	
	Spring 08	ARCH 638-002 Building Skins
Educational Credentials:	1996	M. Arch, University of Pennsylvania
	1991	B.A., University of Pennsylvania
Teaching Experience:	1998-prsnt	Lecturer, University of Pennsylvania
Professional Experience:	1997-prsnt	Head of Washington DC design studio, KlingStubbins Merck & Co., Inc., Merck Research Laboratories, 600K SF, Boston, MA SAP America, Inc., Corporate Headquarters, 400K SF, Newtown Square, PA National Geospatial Intelligence Agency, Headquarters, 2.5M SF Fort Belvoir, VA, 2009 Food and Drug Administration Headquarters, 3M SF, White Oak, MD
Licenses / Registration		Registered Architect, Pennsylvania
Selected Publications:		None
Professional Memberships:		AIA, USGBC, ULI

Davis, Charles		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 712-006 Architecture and Race
Educational Credentials:	2009 2004 2002 1999	PhD Arch, University of Pennsylvania MS Arch, University of Pennsylvania M.Arch, SUNY Buffalo BPS Architecture, SUNY Buffalo (*summa cum laude*)
Teaching Experience:	2005-2008 2008 2002	Lecturer, University of Pennsylvania Lecturer, Parsons – The New School Teaching Assistant, SUNY Buffalo
Professional Experience:	2009-prsnt	Postdoctoral Fellow, Department of Art History, University of North Carolina, Chapel Hill
Licenses / Registration		None
Selected Publications:	2008 2007 2006 2005	"Prologue/Epilogue: the ethical reprieve of Ellison's *Invisible Man*," VIA 13: 42-5 "Kant, Race and Anthropology's Affect: The heuristic role of race in Kantian moral philosophy and neo-Kantian formalism," *APPX*, Spring/Summer "The Antique Roman House of Thomas Jefferson: Power and Representation from Pompeii to Virginia," *Diversity in Design*, Winter "Creating Innovative Environments Inside and Out," *UB Today*, Spring/Summer.
Professional Memberships:	2008 2007 2006	Member, Society of Architectural Historians (SAH) Member, Nineteenth Century Studies Association (NCSA) Member, National Organization of Minority Architects (NOMA) Conference committee member, Unspoken Borders University of Pennsylvania Diversity Counselor, School of Design University of Pennsylvania Secretary, Black Graduate and Professional Students Organization University of Pennsylvania

DeLanda, Manuel Lecturer

Courses Taught:	Fall 09	ARCH 717-001 Self-Organization & Dynamics of Cities
	Spring 09	ARCH 712-001 Philosophy, Materials & Structures
	Fall 08	ARCH 717-001 Self-Organization & Dynamics of Cities
	Spring 08	ARCH 712-001 Philosophy, Materials & Structures
Educational Credentials:	2005	Master Degree in Philosophy from European Graduate School
	1980	Bachelor in Fine Arts from School of Visual Arts
Teaching Experience:	2008-prsnt	Visiting Professor, SciArc
	2006-prsnt	Adjunct Professor, Pratt Institute
	2004-prsnt	Lecturer, University of Pennsylvania
	1995-2004	Adjunct Professor, Columbia University
Professional Experience:	1980-200	3D Computer Modeling
	1990-2009	Writer, Philosopher
Licenses / Registration		None
Selected Publications:	2006	*A New Philosophy of Society: Assemblage Theory and Social Complexity*, Continuum
	2000	*A Thousand Years of Nonlinear History*, Zone Books
Professional Memberships:		None

Erdy, Scott — Lecturer

Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 601-203 Design Studio III
Educational Credentials:	1990	M.Arch, Syracuse University, Syracuse, NY
	1987	BS Arch, Ohio State University, Columbus, OH
	1986	Certificate, Oxford University, Summer Study Program
Teaching Experience:	2002-prsnt	Studio Instructor, University of Pennsylvania, PennDesign
	1998-2001	Visiting Professor, Philadelphia University, Philadelphia, PA
	1997	Adjunct Professor, Philadelphia College of Textiles & Science, Philadelphia, PA
	1995-1998	Visiting Artist, The Lawrenceville School, Lawrenceville, NJ
	1989-1990	Teaching Assistant, Syracuse University, Syracuse, NY
Professional Experience:	1998-prsnt	Principal, Erdy McHenry Architecture, Philadelphia, PA
	1991-1998	Design Director, The Hillier Group, Philadelphia, PA
	1990	Architectural Designer, Gunnar Birkerts & Associates, Bloomfield Hills, MI
	1989	Designer, Giovanna Galfioni Architects, Florence, Italy
	1988	Architectural Intern, Gwathmey Siegel & Associates, New York, NY
Licenses / Registration		Pennsylvania, New Jersey, New York
Selected Publications:	2008	Philadelphia Inquirer “Changing Skyline – Adding Coffee to the Culture (Independence Mall Café) by Inga Saffron (July)
	2008	Architectural Record “Urban Multifamily Housing: Fringe Benefits” featuring One Hancock Square by Jane F. Kolleeny/ Christopher Kieran (June)
	2006	Philadelphia Inquirer “Hometown Modernists” EM Firm Profile by Inga Saffron (August)
	2005	Building Change: Architecture Politics and Cultural Agency, Lisa Findley Routledge (pp.161-191)
	2003	CA1 “Contemporary Architecture (Vol.1)” Edited by Robyn Beaver Images Publishing Group PTY LTD (June)
Professional Memberships:		American Institute of Architects (AIA) National Council of Architectural Registration Boards (NCARB)

Falck, Lindsay		Full Time Lecturer
Courses Taught:	Fall 09	ARCH 531-401 Construction I ARCH 631-001 Tech Case Studies in Evolving Technology HSPV 540-001 American Bldg Technology LARP 511-002 Workshop I – Module 2: Materiality of Landscape
	Spring 09	ARCH 532-401 Construction II LARP 612-001 Workshop IV – Module I: Advanced Construction
	Fall 08	ARCH 531-401 Construction I ARCH 631-001 Tech Case Studies in Evolving Technology HSPV 540-001 American Bldg Technology LARP 511-002 Workshop I – Module 2: Materiality of Landscape
	Spring 08	ARCH 532-401 Construction II LARP 612-001 Workshop IV – Module 1: Advanced Construction
Educational Credentials:	1972	M. Urban and Regional Planning, Univeristy of Cape Town, South Africa
	1956	B. Arch, Univeristy of Cape Town, South Africa
Teaching Experience:	1983-prsnt	Lecturer, Department of Architecture, Landscape Architecture, and Historic Preservation, University of Pennsylvania
	1967-1983	Assistant Dean of School of Design (1994-2003), University of Pennsylvania Professor and Dean, Department of Architecture and Planning, University of Cape Town
Professional Experience:	1987-prsnt	Lindsay Falck Architect, Philadelphia
	1996-prsnt	Consultant for projects in Turkey, Egypt, Bolivia and Angkor Wat on archaeological sites undertaken through the Graduate Program in Historic Preservation, University of Pennsylvania Consultant to Carl Falck Associates Architects, London
	1987-1989	Technology Consultant to Adele Santos, Philadelphia
	1968-1982	Technology Consultant to various firms in Cape Town
	1972-1973	Partner, Lindsay Falck, Michael Low Associates, Cape Town
	1962-1968	Senior Assistant and Partner, Revel Fox & Partners, Cape Town
	1960-1962	Senior Assistant, E Greenblo Architect, Cape Town
	1956-1960	Senior Assistant to Professor Thornton White, Thornton White Architects, Cape Town
Licenses / Registration	1990-prsnt	NCARB PA
	1956-prsnt	ARIBA
Selected Publications:		Various ACSA & South African papers
Professional Memberships:		SAIA, ARCUK, NCARB, ARIBA

Farjadi, Homa — Practice Professor

Courses Taught:

Fall 09	ARCH 701-211 Design Studio IV in London
Spring 09	ARCH 704-206 Research Studio
Fall 08	ARCH 701-211 Design Studio IV in London
Spring 08	ARCH 701-206 Research Studio

Educational Credentials:

2008	Master in History of Film and Visual Media, University of London
1979	Birckbeck, UK AA Graduate Dipl. Honors, Architectural Association School of
1977	Architecture, London MArch, Department of Architecture, School of Fine Arts, Tehran University, Iran

Teaching Experience:

2001-prsnt	Practice Professor of Architecture, University of Pennsylvania
2000 fall	Visiting Professor of Architecture, Columbia University
1999	Graham Visiting Professor of Architecture, University of Pennsylvania
1997-99	Simpson Visiting Professor of Architecture, Edinburgh University
1989-1997	Associate Professor of Architecture, Harvard University
1993,	Saarinen Visiting Chair of Architecture, Yale University
1996	Bishop Visiting Professor of Architecture, Yale University
1988-90	Assistant Professor of Architecture, University of Pennsylvania,
1980- 1988	Architectural Association School of Architecture, London, UKDiploma Unit

Professional Experience:

1998	Farjadi & Farjadi Architects - Master plan of Museum of Urbanism, Taipei, 2008 - Taichung Railway Station Plaza, 1st prize 2006 - Maitreya Project World Buddhist Pilgrimage Centre, 1 of 2 finalists
1985-1998	Farjadi Mostafavi

Licenses / Registration: ARB: UK

Selected Publications:

2009	*Sense Formations:* the projects of Farjadi Architects, Actar Publications, Barcelona, 200 pages
2007	*Agha Khan Award, Master Jury statement*. Awarded projects
In progress	*Dialogic Time of Architecture in the Islamic World*. Modernity and the Islamic World Workshop/Conference, Agha Khan University, London. Paper to be published in the volume documenting conference proceedings. Cultural Modernities, conference Speaker, 2008,
In progress	publication in progress *With Eyes Besides Our Own*: Essays on documentary films of Harun
In progress	Farocki, Birkbeck College, London University, publication in progress *Archaeologies Drawings:* Homa Farjadi Drawings. Publication in progress.

Professional Memberships: Royal Institute of British Architects

Farley, Richard		Adjunct Professor
Courses Taught:	Fall 09	ARCH 535-401 Structures I & 535-402 Lab
	Spring 09	ARCH 536-401 Structures II & 536-402 Lab
	Fall 08	ARCH 535-401 Structures I & 535-402 Lab
	Spring 08	ARCH 536-401 Structures II & 536-402 - Lab
Educational Credentials:	1974	M.Arch, Studio of Louis I. Kahn, University of Pennsylvania
	1973	MS Engineering, University of Pennsylvania Towne School of
	1973	Engineering
	1970	M.Arch, University of Pennsylvania
		BS Civil Engineering, Manhattan College, Riverdale, NY
Teaching Experience:	1983-prsnt	Adjunct Professor (2009-present), Adjunct Associate Professor (1990-2009), Lecturer (1983-1990), University of Pennsylvania
	1982	Lecturer, University of Pennsylvania Towne School, Dept. of Civil Engineering
Professional Experience:	1990-prsent	Senior Principal, KlingStubbins, Philadelphia, PA
Licenses / Registration		PA (architect), NJ (engineer); LEED 2.2 Accredited Professional 2008
Selected Publications:	2009	"Palimpsest," KlingStubbins Monograph
	2006	"Residences at Rodney Square" and "322A Street," *Real Estate &*
	2006	*Construction Review,* volume 4
		"E.J. DeSeta Building – Kling Stylishly Revamps the Bleak Office – Warehouse Norm with a Structure that Adeptly Serves Two Diverse Businesses," *Architectural Record*
Professional Memberships:	2003-prsnt	Urban Land Institute, Philadelphia District Treasurer, Governance Committee (2005-prsnt), Executive Committee, Membership Committee, Technical Advisory Panel (2003-prsnt)
	2007-prsnt	Fellow – College of Fellows of American Institute of Architects
	1992-prsnt	AIA Philadelphia, Board Member and Secretary (2000-2002), Membership Committee, House Committee, Liaison to ULI Philadelphia (2003-2005)
	1992-prsnt	Pennsylvania Society of Architects
	1990	Board Member, KlingStubbins

Fierro, Annette		Associate Professor
Courses Taught:	Fall 09	ARCH 719-001 Archigram & Its Legacy
	Sum 09	ARCH 782-001 Study Abroad Progra – Paris: The City and Its Distractions
	Spring 09	ARCH 502-202 Design Studio II
	Fall 08	ARCH 706-201 Advanced Design Studio
	Sum 08	ARCH 782-001 Study Abroad Progra – Paris: The City and Its Distractions
	Spring 08	ARCH 706-201 Advanced Design Studio
Educational Credentials:	1984	Masters of Architecture, Rice University
	1980	B.Science Civil Engineering, Rice University
Teaching Experience:	2002-	Assoc. Professor of Architecture, University of Pennsylvania
	2008-09	Assoc. Chair, University of Pennsylvania
	1993-2002	Asst. Professor, University of Pennsylvania
	1989-1993	Asst. Professor, Georgia Institute of Technology
Professional Experience:	2006-	Partner, Cabin-Studio+, Philadelphia
	1993-2000	Partner, Ashworth + Fierro Architects, Philadelphia
	1991-93	Principle, RPAF Architects, Atlanta
	1984-89	Assoc. Architect, Smith-Miller and Hawkinson Architects, NY
Licenses / Registration		NY
Selected Publications:	Fall 2009	"INSCRIPTIONS OF VIOLENCE: London's Landscape of Commemoration," *Architecture and Violence*. Kenzari, Bechir, Edtr., (Barcelona/NY: ACTAR), pp. 51-81
	Fall 2009	"Branching Morphogenesis: A Tale of Imagination, Translation and Visualization " *VIA: DIRT* (Philadelphia: PDSP), pp. 213-18
	Fall 2008	"Engaged Theatricality and Resigned Ideologies: Street Theatricality in Richard Roger's London." *UmBau 24 Strategies of Transparency: Between Emancipation and Control*, (Vienna: Verlag Anton Puset), pp.118-139
	Fall 2008	"Mapping Philadelphia." *VIA: OCCUPATION* (Philadelphia: PDSP), p.78
Professional Memberships:		None

Furjan, Helene — Assistant Professor

Courses Taught:	Fall 09	ARCH 611-001 History and Theory III
	Spring 09	
	Fall 08	ARCH 601-205 Design Studio III
		ARCH 611-001 History and Theory III
	Spring 08	
Educational Credentials:	2001	PhD Arch, Princeton University
	1996	MA, Princeton University
	1990	BArch, University of Auckland (Magna Cum Laude)
Teaching Experience:	2005-prsnt	UPenn, Assistant Professor
	2004-05	Rice University, Assistant Professor
	2003-04	SCI-Arc, Adjunct
	2003-prsnt	UPenn, Lecturer
	2001-04	UCLA, visiting Professor
	1999-2001	Architectural Association, Lecturer
	1997-98	Bartlett School UCL, Lecturer
	1993-97	Princeton University, TA, Lecturer
	1991-95	Auckland University, Lecturer
Professional Experience:	1990-prsnt	Furjan & Leman, private practice
Licenses / Registration		None
Selected Publications:	2008	On Eco-Logics," *Art Forum Int.* XLVII, No. 3
	2008	*VIA: Occupation,* eds. Helene Furjan, Tonya Markiewicz and Morgan Martinson *VIA* books (PennDesign), Vol. 1
	2008	"Ambient Flowscapes," *Networks and Environments, DD Monograph: Servo USA—Sweden*, DAMDI
	2008	"Inside the Matrix: The Work of Archi-Tectonics," *Performalism: Form and Performance in Digital Architecture,* Eds. Eran Neuman and Yasha Grobman, Tel Aviv Museum of Art
	2008	"Exhibitionism: John Soane's Model House," *Intimate Metropolis: Constructing Public and private in the Modern City*, Eds. Vittoria Di Palma, Diana Periton & Marina Lathouri, Routledge
	2008	"Cities of Complexity," *Models*: *306090* 11, Princeton Architectural Press
	2008,2006	"Epigenesis," Co-authored with Peter Lloyd Jones, *VIA: Occupations* Via Books; "bio-architectures," *The Gen(H)ome Project,* ed. Peter Noever and Eran Neuman, MAK Center/Open Source Architects
	2007	"Design Research: Notes on a Manifesto," *JAE* 61:1 (Sept.)
	2007	"Sir John Soane: An English Architect, An American Legacy," *JSAH* Vol. 66, No. 3
	2006	"Signature Effects: John Soane and the Mark of Genius" *Interstices* 7 "Eco-logics," *Soft Space*, Eds. Sean Lally, Jessica Young, Routledge
	2005	*Crib Sheets: Notes on the Contemporary Architectural Conversation*, co-editor w. Sylvia Lavin (New York: Monacelli)
Professional Memberships:		NSO, SAH, ACSA

Gardner, Mark		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 671-001 Professional Practice I ARCH 671-001 Professional Practice I
Educational Credentials:	2000 1992	M. Arch, University of Pennsylvania, School of Design BS in Architecture, Georgia Institute of Technology
Teaching Experience:	2007-prsnt	Lecturer, University of Pennsylvania, School of Design
Professional Experience:	2004-Prsnt 2003-2004 2000-2003 1999-2000 1994-1998	Senior Associate, Stephan Jaklitsch Architects, New York, NY Associate, Jeffrey McKean Architect, New York, NY Project Designer/Project Manager, Murphy Burnham & Buttrick Architects, New York, NY Project Designer, Marianna Thomas Architect, Philadelphia, PA Project Designer, Stanley Love-Stanley Architects, Atlanta, GA
Licenses / Registration		USGBC- LEED Accredited Professional
Selected Publications:	2009	Monograph: Stephan Jaklitsch- Patterns Habits Algorithms ORO Editions- Authors: Stephan Jaklitsch & Mark Gardner
Professional Memberships:		American Institute of Architects, Urban Green Council (New York Chapter)- USGBC, National Organization of Minority Architects (NOMA)

Haas, Martin		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 704-203 Research Studio
Educational Credentials:	1995 1993 1992	Diploma in Architecture, University of Stuttgart Stipendium, Southbank University London University of Stuttgart
Teaching Experience:	2009-prsnt	Lecturer, University of Pennsylvania Guest Lecturer: University of Hannover, Germany; Bauhaus Weimar, Germany; Berkeley University, CA; University of Rome, Italy; Technical University of Milano, Italy; Carnegie Mellon University, Pittsburgh; Dublin School of Arts, Ireland;
Professional Experience:	1995-prsnt	Behnisch Architekten (formerly Behnisch, Behnisch, & Partner) - Spa Bath, Romerbad, Austrian Bad Kleinkirchheim (2007) - Haus im Haus, Hamburg's Chamber of Commerce (2007) - RiverParc Urban Rejuvenation Project, Pittsburgh, PA, USA, 2005 – 2014 - Ventspils Concert Hall, Ventspils, Latvia, 2011 - Unilever Germany headquarter building, Hamburg, Germany, 2009 - Marco Polo Tower, Hamburg, Germany, 2009 - Three research buildings Digiteolabs, région parisienne, France, 2009 - Comune di Ravenna e ARPA office and laboratory complex, Ravenna, Italy, 2009 - Oceanographic museum OZEANEUM, Stralsund, Germany, 2008 - Concept Study Senscity Paradise and Acropolis Universe Resort, Las Vegas and Dubai, 2003-2005 - Norddeutsche Landesbank Hannover, Germany, 2002
Licenses / Registration		None
Selected Publications:		None
Professional Memberships:	2009-prsnt 2007-prsnt	BDA, member German Sustainable Building Council, chairman

Henry, Michael		Adjunct Professor
Courses Taught:	Fall 09	ARCH 739/HSPV 551-401 Building Pathology
	Spring 09	HSPV 516 Building Diagnostics & Monitoring
	Fall 08	ARCH 739/HSPV 551-401 Building Pathology
	Spring 08	HSPV 516 Building Diagnostics & Monitoring
Educational Credentials:	1977	MS Engineering, University of Pennsylvania
	1972	BS Mechanical Engineering, University of Houston
Teaching Experience:	2008-prsnt	Adjunct Professor of Architecture, University of Pennsylvania
	2005-2008	Lecturer, University of Pennsylvania
	2005-2009	Visiting Teacher, University College London, Bartlett School of Graduate Studies, Centre for Sustainable Heritage
Professional Experience:	1984-prsnt	Principal, Watson & Henry Associates, Preservation Architects & Engineers, Bridgeton, NJ
Licenses / Registration		Registered Architect: NJ Professional Planner: NJ Professional Engineer: NJ, PA, MA, VA, SC, MD, MI
Selected Publications:	2007	"From the Outside In: Preventive Conservation, Sustainability and Environmental Management," *The Getty Conservation Institute Newsletter*. V22, N1.
	2007	"The Heritage Envelope as Passive & Active Climate Moderator: Reducing the Dependency on Air Conditioning," *Experts' Roundtable on Sustainable Climate Management Strategies, Tenerife, Spain*. The Getty Conservation Institute. (in publication).
Professional Memberships:		American Institute of Architects, American Institute for Conservation of Historic and Artistic Works, American Society of Mechanical Engineers, American Society of Heating Refrigeration & Air-Conditioning Engineers, International Institute for Conservation of Historic and Artistic Works

Hoang, Phu		Lecturer
Courses Taught:	Fall 09	ARCH 501-201 Design Studio I
	Spring 09	ARCH 632-005 Design of Responsive Building Envelopes
	Fall 08	ARCH 601-204 Design Studio III
	Spring 08	ARCH 632-005 Design of Responsive Building Envelopes
Educational Credentials:	1999	M.Arch, Columbia University
	1996	BS in Architecture, Georgia Institute of Technology
Teaching Experience:	2007-09	Lecturer, University of Pennsylvania
	2006	Co-teacher with Bernard Tschumi, Columbia University
Professional Experience:	2001-06	Bernard Tschumi Architects
	2000-01	Michael Hopkins & Partners
	2000	Audrey Matlock Architect
Licenses / Registration		None
Selected Publications:	Date TBD	Young Architects 10:Foresight, Princeton Architectural Press, Pages TBD
	Date TBD	Sustainable Living and Energy Efficient Retrofit Design, Benton Productions, Pages TBD
	Date TBD	Sustainable Solutions for Water Resources, John Wiley & Sons, Pages TBD
	Feb. 2009	Magaz, pg. 25
	Jan. 2009	D News Milano, pg. 19
	Dec. 2008	Dialogue, Linking Publishing, pgs. 80-85
	Dec. 2008	Le Fourquet, pgs.18-19
	Nov. 2008	Monitor, pg. 16
	Oct. 2008	Mark, Mark Publishers, pg.16
	Sept. 2008	Identity, Motivate Publishing, pg. 92
	Sept. 2008	MD, Bismar LTD, pgs. 96
	Aug. 2008	ATD, pgs. 62-65
	Aug. 2008	AI, pgs. 131-139
	Dec. 2007	Metalocus, pgs.144-147
	Sept. 2007	I'm Home, pgs. 131-139
Professional Memberships:	2009-	Architectural League of New York

Hollwich, Matthias — Lecturer

Courses Taught:	Fall 09	
	Spring 09	ARCH 712-004 Top Arch His and Theory II: Tranforming the Nursing Home
	Spring 09	ARCH 502-203 Design Studio II
	Fall 08	ARCH 701-204 Design Studio V
Educational Credentials:	1990-1995	FH Muenchen, Architect
Teaching Experience:	2005-prsnt	University of Pennsylvania, Visiting Professor
	2002-2005	Bauhaus Foundation Dessau, Lecturer
	1999-2001	Eidgenoessische Technische Hochschule, Lecturer
Professional Experience:	2006-prsnt	HOLLWICHKUSHNER LLC, Principal
	2002-2006	XPEXT, Principal
	1996-2001	Office for Metropolitan Architecture, Senior Designer
	1995-1996	Eisenman Architects, Designer
Licenses / Registration		Bayerische Architenktenkammer Sichting Bureau Architectenregister
Selected Publications:	2008	*Updating Germany - 100 Projects for a Better Future*, Verlag Hatje Cantz.
	2007	*Brandscapes - Architecture in the Experience Economy*, MIT Press. *Icon of Modernism: The Bauhaus Building Dessau*, Jovis Verlag GmBH,
	2006	*UmBauhaus - Updating Modernism*, Jovis Verlag GmBH (editor)
	2005	
Professional Memberships:		Bayerische Architenktenkammer Sichting Bureau Architectenregister

Igou, Mark		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 632-006 High Performance Materials & Systems ARCH 632-006 High Performance Materials & Systems
Educational Credentials:	1984	Bachelors of Environmental Design, Texas A&M University
Teaching Experience:	2007-prsnt	Lecturer, University of Pennsylvania
Professional Experience:	1987-prsnt	Skidmore, Owings & Merrill, New York, New York <u>Selected Project Experience</u> The Park Hotel, Hyderabad, India Santa City Master Plan, Mumbai, India Hill County SEZ Office, Hyderabad, India Al Hamra Tower, Kuwait City, Kuwait Bahrain Bay, Manama, Kingdom of Bahrain Arcapita Headquarters, Manama, Bahrain U.S. Census Bureau Headquarters, Suitland, Maryland Changi Airport, Terminal 3, Singapore Roden Crater Fumarole, Flagstaff, Arizona
Licenses / Registration		Registered Architect in the State of New York LEED AP
Selected Publications:	2008 2008 2008 2008 2008 2008	Showing commitment, with brick and mortar, by Madhurima Nandy, MINT / Wall Street Journal: August 5. Bombay slum dwellers' makeover by Skidmore, Owings and Merrill designers, by Rhys Blakely, Times of London: July 21. Maytas first SEZ venture takes off, Economic Times of India: July 17. Foreign architects eyeing to cash in on India's realty, by Neelam Raaj, Economic Times of India: June 15, 2008. Homes for Mumbai slum dwellers from Burj Dubai designers, by Madhurima Nandy, MINT / Wall Street Journal: May 9. Green Office Space, by Lisa Selin Davis, Plenty: May 8.
Professional Memberships:		American Institute of Architects (AIA)

Jamelle, Hina		Lecturer
Courses Taught:	Fall 09	
	Spring 09	ARCH 602-203 Design Studio IV
	Fall 08	
	Spring 08	ARCH 602-203 Design Studio IV
Educational Credentials:	1997	M. Arch, University of Michigan, Ann Arbor, MI
	1993	BA, Cum Laude, Denison University, Granville, OH
Teaching Experience:	2007-prsnt	Lecturer, Department of Architecture, School of Design, University of Pennsylvania, Philadelphia, PA
	2006-prsnt	Visiting Assistant Professor, Graduate Architecture and Urban Design [GAUD], Pratt Institute
Professional Experience:	2003-prsnt	Director. Contemporary Architecture Practice. New York.
	2000-2002	Partner. Razorfish Inc. New York, NY.
	1998-2000	MGA Partners Architects. Philadelphia. PA.
	1994,1995	Zaha Hadid Architects. London. UK
Licenses / Registration		None
Selected Publications:	2010	"Elegant Aesthetics in Digital Architectural Design." *The Journal of Aesthetics and Art Criticism*. June .
	2009	Co-Author. *Elegance.* Architectural Design, Profile No. 185, Vol. 77 No. 1, Academy Editions/John Wiley and Sons Inc., London. March 2007.
	2009	"Contemporary Architecture Practice." Cover Story, *Monitor UnLimited Magazine*. Moscow. July/August.
	2009	"Wall of the Future," *Frame Magazine*, Amsterdam. January/ February.
	2008	"Living the Digital Dream," Neil Spiller, *The National Newspaper of Abu Dhabi*, UAE, April 28,. Review of design work in Dubai, UAE.
	2008	"Instant Houses, Then and Now," Nicolai Oroussof, *New York Times*, July 18. Review of "Wall for the Future".
	2008	"*Home Delivery", Exhibition Catalog*, Museum of Modern Art. Barry Bergdoll and Peter Christiansen. Birkhauser, Basel, Switzerland. August.
	2007	"Contemporary Architecture Practice" *1000 x Architecture of the Americas*. Verlagshaus Braun. Berlin. June.
		"Contemporary Architecture Practice" *Architecture Now*. Neil Spiller. Thames and Hudson. London. October.
		"Panoramiques." 2.1. *Microsoft Magazine France*. November 2007.
		"Innovate or Perish". David Celento. *Harvard Design Magazine*. Cambridge. MA. Spring/Summer.
Professional Memberships:		None

Kieran, Stephen — Adjunct Professor

Courses Taught:	Fall 09	
	Spring 09	ARCH 704-205 Research Studio
	Fall 08	
	Spring 08	ARCH 704-205 Research Studio
Educational Credentials:	1976	M. Arch, University of Pennsylvania, *with honors*
		Bachelor of Art, Yale University, History of Art, *magna cum laude with Departmental Honors*
	1973	
Teaching Experience:	2008-prsnt	Endowed Professor in Sustainability, Mithun/Russell Family Foundation, University of Washington, *(in collaboration with James Timberlake)*
	2002-prsnt	Adjunct Professor, University of Pennsylvania *(in collaboration with James Timberlake)*
	2004-prsnt	Max Fisher Visiting Chair, University of Michigan, *(in collaboration with James Timberlake)*
	1998	Masters Studio Visiting Professor, Syracuse University, *(in collaboration with James Timberlake)*
	1994	Eero Saarinen Distinguished Professor of Design,Yale University, *(in collaboration with James Timberlake)*
Professional Experience:	1999-prsnt	KieranTimberlake, *Partner*
	1984-1999	Kieran, Timberlake & Harris, *Partner*
	1978-1982	Venturi, Rauch and Scott Brown, *Associate*
	1976-1978	Allan Greenberg, *Architect*
Licenses / Registration	Various	PA, NJ, CA, CT, DC, MA, NC;
	1984	NCARB Certificate No. 32937
Selected Publications:	2008	Loblolly House: Elements of a New Architecture. New York: Princeton Architectural Press
	2007	"Research in Design: Planning Doing Monitoring Learning." Journal of Architectural Education: 27-31.
	2005	"Future Worlds: Urgent Reflections on Design of Practice." Practices 7/8.
Professional Memberships:		BuildingEnvelopes.org, Consortium Partner, Harvard University Center for Design Infomatics and the MIT Building Technology Group
		House N Research Group, Open Source Building Alliance, MIT
		American Collegiate Schools of Architecture
		American Institute of Architects, College of Fellows, 1996
		The Athenaeum of Philadelphia
		Society of Fellows, American Academy in Rome, 1980-81

Kolatan, Ferda — Full Time Lecturer

Courses Taught:	Fall 09	ARCH 703-202 PPD Design Studio
	Spring 09	ARCH 602-201 Design Studio IV
		ARCH 744-401 Design Fabrication
	Fall 08	ARCH 601-202 Design Studio III
	Spring 08	ARCH 602-201 Design Studio IV
Educational Credentials:	1995	MsAAD, Columbia University
	1993	RWTH Aachen, Dipl.Ing
Teaching Experience:	2004-prsnt	Lecturer, University of Pennsylvania
	2005	Visiting Professor, RWTH Aachen
	2004	Visiting Adjunct Professor, Pratt Institute
	2002-04	Adjunct Assistant Professor, Columbia University
	2001-02	Adjunct Professor, RPI
	2001	Visiting Adjunct Professor, University of British Columbia
	1997-2000	Associate in Architecture, Columbia University
Professional Experience:	1998-prsnt	Founding Partner, su11 architecture+design
	1995-2000	Senior Designer, Smith-Miller+Hawkinson Architects
	1993-1994	Senior Designer, Nikolic and Partner, Berlin
	1991-1992	Junior Designer, Gerkan, Marg and Partner, Aachen
Licenses / Registration		None

Selected Publications:

2008 Tramontin, Ludovica. “su11 architecture+design”. PressLetter [Italy]

2008 Future Arquitecturas [Madrid] 2008: #14

2007 Interior Architecture of China [Beijing] Dec 2007, pp. 226-231

2007 “Instant Bodies”. Die Planung-A Terv [Berlin+Budapest] June/July 2007: #25,2011

2007 “Case Study>DuneHouse.” Monitor [Moscow] 2007: #44, p. 47

2007 Marchisio, Eugenia. “Nevada House”. Casamica 23 May 2007

2007 Hawthorne, Christopher. “Live for Tomorrow”. Los Angeles Times April 14, 2007

2007 Webb, Michael. “In Pasadena, A Look at Forward-Looking Houses”. The New York Times April 12, 2007.

2006 Space [Seoul] 2006: #467, pp. 114-115.

2006 Open House, Architecture and Technology for Intelligent Living. Vitra Design Museum, 2006.

2006 Kraft, Sabine. Arch+ [Berlin] May 2006: 176/177.

2005 Hausleeren II. Aachen: Baukonstruktion 3 RWTH Aachen, 2005, pp. 131-135, 246-247.

2005 Von Keitz, Kay and Voggenreiter, Sabine. Plan 04 Wohnen1. Koeln: Fries Printmedien, 2005, pp. 72-75.

Professional Memberships: None

Krone, Ben		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 501-205 Design Studio I ARCH 501-205 Design Studio I
Educational Credentials:	2004	M. Arch, Columbia University B. Design, University Of Florida
Teaching Experience:	2009 2004-	Lecturer 3rd year advanced Studio, Columbia University Lecturer, 1st year studio & Visual Studies, University of Pennsylvania
Professional Experience:	2008-9 2002-8 1999-2001	Gradient Design Studio, Founder/ Principal SHoP Architects, New York Valerio Dewalt Train, Chicago IL
Licenses / Registration		In process
Selected Publications:	2008 2006 2007	Rococo the Continuing Curve exhibition monograph designer of 'bloom field' for Cooper Hewitt National Design Museum Surface Magazine, Annual Design issue, 65 p 92-95, 'Higher planes' Architects Newspaper June 20th 2007 Q&A with Ben Krone
Professional Memberships:		None

Lahiji, Nadir		Lecturer
Courses Taught:	Fall 09	ARCH 511-001History and Theory I
	Spring 09	ARCH 712-005 Sublime Object of Baroque
	Fall 08	ARCH 611-001 History and Theory III
	Spring 08	
Educational Credentials:	1992	Ph.D, Architecture, University of Pennsylvania
	1974	M.Arch, National University of Iran
Teaching Experience:	1985-prsnt	Lecturer (1999-prsnt); Teaching Assistant (1985-1986), University of Pennsylvania
	1998-prsnt	Adjunct Associate Professor, Drexel University
	1993-1998	Assistant Professor, Georgia Institute of Technology
	1988-1992	Instructor, Georgia Institute of Technology
	1995	Adjunct Associate Professor (Summer), Drexel University
	1993	Guest Faculty, Universitat Politecnica de Catalunya, in Barcelona, "The Culture of the Metropolis" Program (Summer)
	1987-1988	Special Lecturer, New Jersey Institute of Technology
	1986-1987	Assistant Professor, University of Idaho
Professional Experience:	1994	"Temple of Laughter," Sponsored by THE END, with Xavier Costa, Ilivette Hidalgo and Magnus Nilsson
	1991	"Samarkand Revitalization," an International Competition on Ideas for Uluge Beg Cultural Center, Sponsored by USSR Union of Architects, the Aga khan Trust for Culture and the Uzbek Union of Architects, with D.S. Friedman
Licenses / Registration		None
Selected Publications:	1997	*Plumbing: Sounding Modern Architecture*, co-editor, Princeton Architectural Press
Professional Memberships:	1990-1998	Member, Atlanta Architect Society
	1991-1997	Member, Society of Architectural Historians, Southeast Chapter

Leatherbarrow, David		Professor
Courses Taught:	Fall 09	ARCH 711-401 Cultural Ecology ARCH 811-001 Architectural Research
	Spring 09	ARCH 512-001 History and Theory II
	Fall 08	ARCH 711-401 Cultural Ecology ARCH 811-001 Architectural Research
	Spring 08	ARCH 512-001 History and Theory II
Educational Credentials:	1983	PhD Arch, University of Essex
	1976	B Arch, University of Kentucky
Teaching Experience:	1984-prsnt	Professor (1996-prsnt); Associate Professor (1990-1996); Assistant Professor (1984-1990), University of Pennsylvania
	1980-1983	Design Tutor and Lecturer, University of Cambridge
	1979-1983	Design Tutor and Lecturer, Polytechnic of Central London
Professional Experience:	1984-prsnt	Private practice with Lauren Leatherbarrow
Licenses / Registration		none
Selected Publications:		*Books*
	2009	*Architecture Oriented Otherwise*, Princeton Arch. Press
	2004	*Topographical Stories*, Univ. of Penn. Press
		Articles between 2008 and 2009 only:
	2009	"Frameworks of Performance and Delight," with R. Wesley, *Harvard Design Magazine*, 84-95
	2009	"Between Soil and Sky. . . Latin American Landscapes," in *New Latin American Landscape Architecture*, 4-10
	2009	"*The Craft of Criticism*," in *JAE*, no. 260, 21, 96-99
	2009	"Skylines," in *Content*, 24-35
	2008	"Creative Movement," in *Umeni*, vol. 56, 504-13
	2008	"Working Materials," in *Building Material*, no. 10, 3-20
	2008	"Shadow Society," in *Via*, 178-180
	2008	"Architecture, Ecology, and Ethics," in *Heaven and Earth*, essays in honor of Karsten Harries.
Professional Memberships:	1993-prsent	Institute for Urban Design
	1993-prsnt	National Institute for Architectural Education

Malkawi, Ali — Professor

Courses Taught:	Fall 09	ARCH 533-401 Environmental Systems I ARCH 732-001 Building Systems Integration
	Spring 09	
	Fall 08	ARCH 533-401 Environmental Systems I ARCH 732-001 Building Systems Integration
	Spring 08	ARCH 632 002 Simulation and Design
Educational Credentials:	1994	Ph.D, Georgia Institute of Technology
	1990	M. Arch, University of Colorado
	1989	B.S., Jordan University of Science and Technology
Teaching Experience:	2001-prsnt	Professor of Architecture (2007-prsnt); Associate Professor (2001-2007), University of Pennsylvania
	2001 & 2002	Visiting Professor, Harvard University (spring)
	1994-2001	Assistant Professor of Architecture (1996-2001); Visiting Assistant Professor (1994-1996), University of Michigan at Ann Arbor
	1992-1994	Instructor, Georgia Institute of Technology
	1992	Instructor, American College for the Applied Arts
Professional Experience:	2006-prsnt	Founder and Executive Director, T.C. Chan Center, University of Pennsylvania
	2007-prsnt	Consultant, BARWA (2007-prsnt); ADPI Engineers and Planners (2006-prsnt); Jaime Rouillon Arquitectura (2005-prsnt); SOM (2006-2008); Kling (2005-2008); Atkin Olshin Shade Architects (2008); KPF (2008); Chamber Music Society (2006); Maki and Associates (2005)
Licenses / Registration		Jordan
Selected Publications:	2008	Site-Specific Prediction for Energy Simulation by Integrating Computational Fluid Dynamics, Building Simulation An International Journal, 1, 270-277.
	2008	Evacuation Simulation Models: Challenges in Modeling High Rise Building Evacuation With Cellular Automata Approaches, Automation in Construction Journal, 17, 377-385.
	2007	Comparison of Crowd Simulation for Building Evacuation and an Alternative Approach, In Proceedings of the Tenth International Building Performance Simulation Association (IBPSA) Conference Held in Beijing, China, , 1514 – 1521.
	2007	Energy-based Decision Support System for Facilities Management: Integration of Data/Web Mining, Knowledge Base and Thermal Simulation." In Proceedings of the Tenth International Building Performance Simulation Association (IBPSA) 1557 – 1563.
	2007	Toward Real-Time Indoor Airflow Simulations for Immersive Visualization Using Adaptive Localization Method, In Proceedings of the Tenth International Building Performance Simulation Association (IBPSA), 952 – 957.
Professional Memberships:		The International Building Performance Simulation Association The American Society of Heating Refrigerating and Air Conditioning Engineers

Manis, Tina		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 601-206 Design Studio III ARCH 601-206 Design Studio III
Educational Credentials:	1993 1989	M. Arch, Columbia University Interior Architecture, California College of Arts
Teaching Experience:	2006-prsnt 2003-prsnt 2005-2007	Lecturer, University of Pennsylvania Lecturer, Graduate School of Architecture, Columbia University Lecturer, Barnard College, New York
Professional Experience:	2000 1999-2001 1997-1999	Founder and Principal, Tina Manis Associates, LLC Office for Metropolitan Architecture Richard Rogers Partnership
Licenses / Registration		None
Selected Publications:	2009 2009 2009 2008 2007 2007 2005	"A Pavilion in a Million," *Interior Design* "Planting Pavilions," *Architect's Newspaper* "International Competition Winner," *The art Fund Pavilion* "Butler Street Residence feature," *Brooklyn Modern: Modernist Aesthetics Touching the Past* "Architects Directory 2007: Top Ten Picks," *Wallpaper* "Design – Tina Manis: equal parts family and firm," *Architectural Record* "House in Town," *Architect's Newspaper*
Professional Memberships:		None

Mardeusz, Stuart		Lecturer
Courses Taught:	Fall 09	
	Spring 09	ARCH 638-003 Building Systems
	Fall 08	
	Spring 08	ARCH 638-003 Building Systems
Educational Credentials:	May 1995	M.Arch, University of Pennsylvania, School of Design Cetificate in Urban Design
	May 1990	B.A. Design of the Environment, University of Pennsylvania
Teaching Experience:	2008-2009	Lecturer, University of Pennsylvania, School of Design
	2003-2004	Studio Critic, University of Pennsylvania, School of Design
	1999	Lecturer, University of Pennsylvania, Landscape Architecture
	1996	Associate Lecturer, Architekturzentrum Wein, 7th Viennese Seminar on Architecture
	2004, 2007	Instructor, AIA, ARE Preparation Course
		Visiting Juror: T.U. Delft , Architectural Association, London Academie van Bouwkunst, Antwerp, University of Pennsylvania, Philadelphia University, Drexel University
Professional Experience:	2007-2009	Senior Associate, KlingStubbins, Philadelphia
	1999-2007	Associate, Atkin Olshin Schade Architects, Philadelphia
	1997-1999	Staff Architect, Kling Lindquist, Philadelphia
	1995-1997	Staff Architect, S.333 Architecture and Urbanism, Rotterdam
Licenses / Registration	2003	Registered Architect, Pennsylvania
	2006	LEED Certified
Selected Publications:		None
Professional Memberships:		USGBC, AIA

Martin, Muscoe		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 734-001 Ecological Architecture
Educational Credentials:	1985 1978	M.Arch, University of Pennsylvania B.A., Princeton University
Teaching Experience:	1996-pres 1995-1996 1987-1990	Lecturer, University of Pennsylvania Instructor, Drexel University Instructor, Temple University Invited Juror, Harvard, Temple, Drexel, Philadelphia University, University of Maryland
Professional Experience:	2006-prsnt 2002-2005 1996-2002 1985-1996	Founder & Principal, m^2 Architecture Senior Associate, Wallace Roberts & Todd, LLC. Principal, Susan Maxman & Partners, Ltd. Senior Associate, Jacobs/Wyper Architects
Licenses / Registration		Registered Architect – PA, NJ, MD. NCARB Certificate Holder. LEED® Accredited Professional since 2001. Green Advantage Certified
Selected Publications:	2008 2007	"Living Building Challenge – Hard Bargain Farm," Proceedings of the 2008 Greenbuild Conference. Sustainable Design II, National Council of Architectural Registration Boards, Monograph
Professional Memberships:		USGBC, DVGBC ,AIA USGBC LEED Faculty Board Member, Sustainable Development Fund Member, LEED Steering Committee Former Board Member, US Green Building Council

McCleary, Peter		Professor
Courses Taught:	Fall 09	ARCH 731-001 Experiments inStructure
	Spring 09	
	Fall 08	ARCH 701-203 Design Studio V
		ARCH731-001 Experiments in Structure
	Spring 08	
Educational Credentials:	1971	M A. (Hon) Architecture, University of Pennsylvania
	1963	D.I.C., Technology and Structures: Imperial College, London
	1961	BS engineering and Applied Science, Glasgow University
	1961	A.R.C.S.T. Civil Engineering, University of Strathclyde
Teaching Experience:	1956-prsnt	Professor (1974-prsnt), University of Pennsylvania: Director, Program in Emerging Technology (1998-2001); Director, Post-graduate Professional Program (1993-96); Chairman, Ph.D. Graduate Group in Architecture (1982-88); Chairman and Founder, Program in Historic Preservation (1981-82); Director, Penn. Paris Program in Architecture (1980-2006); Chairman, Dept. of Architecture (1974-81); Associate Professor (1968-74); Assistant Professor (1966-68); Lecturer (1965-66)
Professional Experience:	2003	Delaware River Port Authority High-Tram Towers
	2001	Formation of PMC Int. LLC.
	1994-2001	Consultant to several Swiss and French architects: (J.M. Lamuniere, P. Mestelan, Marc Collomb, Lorenz & Musso, Brauen & Waelchli, B. Huet, F. Montes).
	1993-1998	Collaboration with James Carpenter Associates, New York
	1990-1998	Consultant to Future Tents Ltd., Architects, New York; Medhat Dorra, Cairo, Egypt: and Khaled Dewidar, Cairo.
	1987-1989	Co-Director, Partnership for Professional Development (A.I.A, Coxe Group and U. of Penn)
	1986-1988	Senior Research Consultant to Davis, Brody & Assoc., Architects, NYC
	1982	Consultant to S.I.R., Inc., Houston, Texas
	1980	Design of Pedestrian Bridge for the University of Pennsylvania Consultant to Davis, Brody & Assoc., New York City
	1965-1974	Designs of Tacony Creek Parkway, Phila. Consultant to Louis I. Kahn; Louis Sauer; Wallace, McHarg; Philadelphia Bicentennial Commission.
Licenses / Registration		None
Selected Publications:	2008	"Design for Complexity: Architecture and Health-care Facilities." In RBSD Architects: 1908-2008.
	2005	2005 "Performance (and Performers) in Search of Direction (and a Director)." In Performative Architecture: Beyond Instrumentality. pp.215-225. Edited by Branko Kolarevic and Ali M. Malkawi. New York: Spon Press.
Professional Memberships:		None

McHenry, David — Lecturer

Courses Taught:	Fall 09	
	Spring 09	ARCH 772-001 Professional Practice III
	Fall 08	
	Spring 08	ARCH 772-001 Professional Practice III
Educational Credentials:	1991	MBA with Concentration in Real Estate and Urban Land Studies, Temple University, Philadelphia, PA
	1983	B. Arch, Temple University, Philadelphia, PA
Teaching Experience:	2005–prsnt	Lecturer, University of Pennsylvania
	1999-2006	Adjunct Professor, Philadelphia University
Professional Experience:	1998–prsnt	Principal, Erdy McHenry Architecture, Philadelphia, PA
	1985-1998	Studio Principal, The Hillier Group, Philadelphia, PA
	1983-1985	Resorts International Development, Atlantic City, NJ
	1981-1983	Ballinger, Philadelphia, PA
Licenses / Registration		Pennsylvania, New Jersey, New York
Selected Publications:	2008	Philadelphia Inquirer “Changing Skyline – Adding Coffee to the Culture (Independence Mall Café) by Inga Saffron (July)
	2008	Architectural Record “Urban Multifamily Housing: Fringe Benefits” featuring One Hancock Square by Jane F. Kolleeny/ Christopher Kieran (June)
	2006	Philadelphia Inquirer “Hometown Modernists” EM Firm Profile by Inga Saffron (August 2006)
	2005	Building Change: Architecture Politics and Cultural Agency, Lisa Findley Routledge (pp.161-191)
	2003	CA1 “Contemporary Architecture (Vol.1)” Edited by Robyn Beaver Images Publishing Group PTY LTD (June)
	2003	Remodeling “Fit for a Family – Architect Turns a Jumble of Rooms into a Sunny Gathering Space” by Kim Catanzerite (April/May)
	2002	Philadelphia Inquirer “Changing Skyline – Enterprise Heights” by Inga Saffron (September)
	2001	Architecture Magazine “Cover Feature- Southern Poverty Law Center," by Anne Guiney BPI Communications (September)
Professional Memberships:		American Institute of Architects (AIA), Member National Council of Architectural Registration Boards (NCARB), Member

Mertins, Detlef		Professor
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 511-001 History and Theory I
Educational Credentials:	1996 1991 1980	PhD Arch, Princeton MA, Princeton, University B.A. (honors), University of Toronto
Teaching Experience:	2003-prsnt 1991-2002 1990 1983-1989 1985-1988	Professor, with tenure (2003-prsnt); Chair (2003-2008), University of Pennsylvania Associate Professor, with tenure (1998-2002); Assistant Professor (196-1998); Lecturer (1991-1996); Director (2001-2002), Master of Architecture Program and Coordinator of Graduate Studies, University of Toronto Teaching Assistant, School of Architecture, Princeton University Adjunct Assistant Professor (1986-1989); Seasonal Lecturer (1983), School of Architecture & Landscape Architecture, University of Toronto Adjunct Assistant Professor, School of Architecture, University of Waterloo
Professional Experience:	1985-2000 1984-1986 1980-1983	Founder, Mertins Architect, Toronto, Ontario Associate-in-Charge, Jones & Kirkland, Architects, Toronto, Ontario Baird/Sampson Associates, Architects, Toronto, Ontario
Licenses / Registration		RAIC, ACSA
Selected Publications:	2000 1996	Editor and Introduction for the translation of Walter Curt Behrendt, *The Victory of the New Building Style* (Santa Monica: The Getty Research Institute, 2000): 1-84, 145-154. *Transparencies Yet to Come: Sigfried Giedion and the Prehistory of Architectural Modernity* (Ann Arbor: UMI, 476 pages) (Princeton University Dissertation). Reviewed by Sokratis Georgiadis, "Kommende Transparenz," *Werk, Bauen +Wohnen*, 5, 1997, 72-74.
Professional Memberships:	1987-prsnt 1987-prsnt	Member, Ontario Association of Architects Member, Royal Architectural Institute of Canada (Chair, Publications Steering Committee 1992-96) Member, Society of Architectural Historians Member, Society for the Study of Architecture in Canada

Morrison, Jon — Lecturer

Courses Taught:	Fall 09	
	Spring 09	ARCH 632-004 Design for Light Structures
	Fall 08	
	Spring 08	ARCH 632-004 Design for Light Structures
Educational Credentials:	2004	M.A., *Mathematics*, Villanova University
	1982	M.Engr. *Civil Engineering*, Texas A&M University
	1981	B.S. *Civil Engineering*, Texas A&M University
Teaching Experience:	2008-prsnt	Lecturer, University of Pennsylvania, Spring semesters
	1988-1995	Adjunct Assistant Professor and Advisor, Drexel University
	1981	Graduate Lecturer, Texas A&M University
Professional Experience:	1988-2009	Christakis VanOcker Morrison, Inc.
	1986-1988	Keast & Hood Co.
	1984-1986	McCormick Taylor & Associates
	1982-1984	State of Texas Bridge Design Unit
Licenses / Registration		Pennsylvania, Maryland, Colorado, Massachusetts, Vermont, Connecticut, Missouri, Virginia, New Jersey, Maine, New York, Washington DC
Selected Publications:		None
Professional Memberships:		American Society of Civil Engineers, Aesthetics in Design Committee American Institute of Architects, Affiliate - Philadelphia Chapter Structural Engineering Institute

Mueller-Russo, Katrin		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 726-401 Furniture Design ARCH 726-001 Furniture Design
Educational Credentials:	1992	Diplom-Designerin Industrail Design, Hochschule für Bildende Künste, Hamburg, Germany
Teaching Experience:	2008-prsnt 2004-prsnt 2004-prsnt	Lecturer, Department of Architecture, University of Pennsylvania Adjunct Professor and Coordinator Senior Portfolio / Professional Practice, Industrial Design Department, Undergraduate and Graduate Program, Pratt Institute, New York, NY Faculty and Coordinator 3D Foundation, IDC (Integrated Design Curriculum) and Foundation Department, Parsons The New School for Design, New York, NY
Professional Experience:	1997-prsent 2007-2008 2007 1998-2006 2003-2000 1998-1999 1997 1993-1995	President, Specific Objects Inc, Brooklyn, NY (independent design consultant in New York and Berlin for firms such as De Breuyn Kindermöbel Köln, Hamilton Watches Consultant, Hoberman Associates NY (foldable products for Graco) Consultant, Museum of Modern Art NY / PS1 Young Architects Program (product line for the MoMA Store in commemoration of RuyKlein's Knot Garden) Causeway Competition, Ireland (2005) and (P)article House, New York, NY (1998); Collaboration with Rhett Russo Design, Director, Hoberman Designs, New York, NY Project Designer and Project Manager, Hamilton Watch, Weehawken, NJ Curator and Project Desiger, Material ConneXion, New York, NY Project Designer and Instructor, Inab Ausbildungs-und Beschäftigungs-GmbH (Training and Instruction Company), Berlin, Germany
Licenses / Registration		None
Selected Publications:	2009	LG Studio "The Kitchen of the Future," Pratt Publication Industrial Design and Interior Design Department (in process)
Professional Memberships:		None

Nakahara, Asuka		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 768-401 Real Estate Development
Educational Credentials:	1980 1977	Harvard Business School, MBA Rice University, BS – Civil Engineering
Teaching Experience:	1980-prsnt	Adjunct Lecturer, The Wharton School, University of Pennsylvania
Professional Experience:	2000-prsnt 1999 1977-1978	Associate Director, Zell-Lurie Real Estate Center at Wharton, University of Pennsylvania Chief Financial Officer & Various Other Positions, Trammell Crow Company Lockwood, Andrews & Newnam - Engineer
Licenses / Registration		Engineer in Training - Texas
Selected Publications:	None	None
Professional Memberships:		Commercial Real Estate Women, National Association of Office & Industrial Parks

Norten, Enrique		Practice Professor
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 701-202 Design Studio V ARCH 701-202 Design Studio V
Educational Credentials:	1980 1978	M. Arch, Cornell University B. Arch, Universidad Iberoamericana, Mexico City
Teaching Experience:	1998- 2004 2003 1997 1996 1994 	Miller Chair of Architecture, University of Pennsylvania Eero Saarinen Visiting Professor, Yale University Visiting Professor, UCLA Emil Lorch Professor of Architecture, University of Michigan Elliot Noyes Visiting Design Critic, Harvard University O'Neil Ford Chair in Architecture, University of Texas, Austin Distinguished Visiting Professor, Cornell University Visiting Professor, Southern California Institute of Architecture
Professional Experience:	1986-	Founder and Principal, TEN Arquitectos
Licenses / Registration		NCARB NY; Mexico
Selected Publications:	2008 2007 2005	Ten Arquitectos Intenciones Intentions, Exhibition Catalogue Ten Qrquitectos Working: 20 Projects in Process, Monacelli Press Taller de Enrique Norten Arquitectos: Temas & Variaciones, Landucci Editores
Professional Memberships:	2008-prsnt 2007-prsnt 2006-prsnt 2005-prsnt 2003-prsnt	Mexican Cultural Institute of New York, Board Member Americas Society/Council of the Americas, Board Member Moore College of Art and Design, Member of Advisory Council Alfred Herrhausen Society, Deutsche Bank, Board of Trustees Member Holcim Foundation for Sustainable Construction, Board of Trustees Member Mexican Academy of Architects, Member

Owen, Josh		Lecturer
Courses Taught:	Fall 09	ARCH 729-401 Design of Contemporary Products
	Spring 09	ARCH 728-401 Design of Contemporary Products
	Fall 08	
	Spring 08	ARCH 728-401 Design of Contemporary Products
Educational Credentials:	May, 1997	MFA Furniture Design, The Rhode Island School of Design
	May, 1994	BA Visual Studies, Cornell University
	May, 1993	BFA Sculpture, Cornell University
Teaching Experience:	2008-prsnt	Lecturer, Department of Architecture, University of Pennsylvania
	2007-prsnt	Associate Professor (industrial design), Philadelphia University
	2001-2007	Assistant Professor (industrial design), Philadelphia University
	1999-2001	Adjunct Professor (industrial design), Philadelphia University
	1998-1999	Adjunct Professor (furniture design), Moore College of Art and Design
Professional Experience:	2005-prsnt	President, Josh Owen LLC
	1996-2004	Principal, Owenlogik Design
Licenses / Registration		None
Selected Publications:	2005	Josh Owen: Big Ideas / Small Packages, Woodsphere. 87 pages.
Professional Memberships:		None

Payne, Andrew

Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 511-001 History and Theory I
Educational Credentials:	2002 1985 1982	PhD, English Literature, University of Toronto M.A., English Literature, York Univeristy B.A., English Literature, York Univesity
Teaching Experience:	2003-prsnt 2008 1996-prsnt	Instructor, Daniels Faculty of Architecture, Landscape and Design Lecturer, University of Pennsylvania Senior Lecturer (2007-prsnt); Assistant Professor (2002-2007); Lecturer (1996-2002), University of Toronto
Professional Experience:	2003-2008	Director, undergraduate Architectural Studies Program
Licenses / Registration		None
Selected Publications:		*Thales or some Other: Construction in the Intellectual and Cultural Legacies of Modernity* *Clamors of Being: The Genesis of Sense in Gilles Deleuze, Alain Badiou, and Jacques Derrida* (with Rodolphe el-Khoury) *Architecture and the Culture of Sense (manuscript currently under consideration by ORO Editions)*
Professional Memberships:		None

Phillips, Brian — Lecturer

Courses Taught:	Fall 09	ARCH 601-204 Design Studio IV
	Spring 09	ARCH 602-204 Design Studio IV
	Fall 08	
	Spring 08	ARCH 602-204 Deisgn Studio VI
Educational Credentials:	1996	M. Arch, University of Pennsylvania
	1994	BsEd, University of Oklahoma
Teaching Experience:	2008-prsnt	Lecturer, University of Pennsylvania
Professional Experience:	2004-prsnt	Founder, Interface Studio Architects LLC, Philadelphia
	1996-2004	Associate, Wallace Roberts & Todd LLC, Philadelphia
Licenses / Registration		NCARB, LEED AP, Licensed Architect Pennsylvania, Licensed Architect NJ
Selected Publications:	2009	*Building the McMini. Changing Skyline. The Philadelphia Inquirer. May 2009.*
	2008	*Nice Modernist. DWELL Magazine. February 2008.*
	2008	*From the Betsy Ross to Your House. METROPOLIS Magazine. January 2008.*
	2006	*Crossover: Architecture, Urbanism, Technology. Urban Interfaces: Designing In-Between. Editors: Arie Graafland and Leslie Jaye Kavanaugh. 010 Publishers, Rotterdam, NL. 2006.*
	2004	*By Design: Editing the City. 306090: A Journal of Emergent Architecture + Design. No. 6. 2004.*
Professional Memberships:		American Institute of Architects

Phinyawatana, Naree		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 638-004 Day Lighting
Educational Credentials:	2007 2004 2002 2002	Doctor of Design, Harvard University Master in Design Studies, Harvard University M.Arch, Norwich University BS Architectural Studies, Norwich University
Teaching Experience:	2009 2007-2009 2006-2007 2004-2006	Lecturer in Architecture, University of Pennsylvania Guest Lecturer, Yale University, School of Art and Architecture Lecturer in Architecture, Harvard University, Graduate School of Design Teaching Fellows, Harvard University, Graduate School of Design
Professional Experience:	2007-prsnt	Environmental Designer, Atelier Ten
Licenses / Registration		none
Selected Publications:	2007	Urban Canyon Design, DDes Dissertation, Harvard University Designing with Nature, Thesis, Norwich University
Professional Memberships:	2007-prsnt	U.S. Green Building Council LEED AP

Pratt, Kevin		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 713-001 Ecology Technology and Design
Educational Credentials:	2004	M.A., Environment & Energy Programme, The Architectural Association Dissertation Title: Hooke Park: Teaching Sustainablilty
	1992	B.A. Architecture (honors), Columbia College, Columbia University
Teaching Experience:	2006-2009	Assistant Professor (2008-2009); Visiting Lecturer (2006), School of Art, Architecture, and Planning, Cornell University
	2007-2008	Lecturer, University of Pennsylvania
	2008-prsnt	Fellow, Cornell Center for a Sustainable Future
Professional Experience:	2008-prsnt	Principal and CoFounder (with Dana Cupkova), *Epiphyte Labs*
	1992	Democratic National Convention Committee Construction Manager & Design Coordinator
	1993-1998	Associate (1995-1998), Intern (1993-1995), Martin E. Rich Architect
	1998-2003	Architectural Designer, *Evans Heintges Architects PLLC*
	2004-2007	Director of Research, *KieranTimberlake Associates PLLC*
Licenses / Registration		State of New York LEED 2.0 Certified Professional
Selected Publications:	2008	"On Geoengineering" Artforum, November
	2008	"Escape Velocity" Artforum, June
	2007	"Clip/Stamp/Fold" Artforum, May
	2006	"A Newer New Orleans" Artforum, March
Professional Memberships:		None

Rahim, Ali — Associate Professor

Courses Taught:	Fall 09	ARCH 701-201 Design Studio V
	Spring 09	ARCH 704-201 Research Studio
	Fall 08	ARCH 701-201 Design Studio V
		ARCH 741-001 Architectural Design Innovation
	Spring 08	ARCH 704-201 Research Studio
Educational Credentials:	1996	M Arch, Columbia University with Honors, New York, NY
	1987	BS, University of Michigan, Ann Arbor, MI
		Rugby School, Oxford and Cambridge University Board, Rugby, United Kingdom 1983
Teaching Experience:	1999-prsnt	Associate Professor with tenture (2006-prsnt), Assistant Professor (1999-2006), Lecturer (1998-1999), University of Pennsylvania, Department of Architecture, School of Design, Philadelphia, PA
	2008-2009	University of Applied Arts [De Angewandte], Vienna, Austria
	2007 Fall 2006	Guest Professor, Zaha Hadid Studio
	1997-1998	Louis I. Kahn Visiting Professor, Yale University, School of Architecture. New Haven, CT
	1996-1997	Visiting Professor, Harvard University, Graduate School of Design, Cambridge, MA
	1994-1996	Adjunct Assistant Professor, University of Michigan, College of Architecture and Urban Planning, Ann Arbor, MI
		Teaching Assistant, Columbia University, Graduate School of Architecture, Planning and Preservation, New York, NY
Professional Experience:	1999-prsnt	Design Director, Contemporary Architecture Practice New York, NY
	2009-	Viceroy Hotel, Abu Dhabi, UAE
	2008-	Lutron Electronics Pavilion. Coopersburg, PA
	2008-	Jingumae Orthodontics, Tokyo, Japan
	2008- 2008	Bali Residence. Indonesia
		Museum of Modern Art [MoMA] Installation. New York, NY.
	2007-	169-183 10th Avenue. New York, NY. 77,370 SF Hotel for Highline District in West Chelsea.
Licenses / Registration		None
Selected Publications:	2007	Co-Editor with Hina Jamelle, *Elegance. Beyond Digital Techniques in Architecture.* Architectural Design, Academy Editions/John Wiley and Sons Inc., London.
	2006	Author. *Catalytic Formations: Architecture and Digital Design*, Taylor and Francis [Routledge], London.
Professional Memberships:		None

Rickenbacker, Shawn		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 602-205 Design Studio IV
Educational Credentials:	1994 1990	M. Arch, University of Virginia Campbell School of Architecture B Arch, Syracuse University School of Architecture
Teaching Experience:	2005-prsnt 2008 2000 1998-2002 1994-1998	Lecture, Graduate School of Design, University of Pennsylvania Visiting Professor of Architecture, School of Architecture, Syracuse University Unit Instructor, Architectural Association, London Assistant Professor of Architecture, Knowlton School of Architecture, Ohio State University University of Virginia, Assistant Professor of Architecture
Professional Experience:	2004-prsnt	Partner, Rickenbacker + Leung LLC - CreativeFront - Erhankrantz and Ekstut - Polshek Partnership
Licenses / Registration		NY State Pending
Selected Publications:	2008 2008 2008 2007 2007	Discrete Objects and Sudden Beauty, Inaugural Lecture Syracuse University SOA Open, Ghenet Restaurant , The Architects Newspaper, Daniel Rago Modern Shoestring: Contemporary Architecture on a Budget, S. Sirefman, Monacelli Press "A Palate for Pallets" Annie Block, Interior Design, Magazine June "Drawn In" Exhibition, August Wilson Center for African American Culture, Pittsburgh PA
Professional Memberships:		NOMA

Russo, Rhett		Full Time Lecturer
Courses Taught:	Fall 09	
	Spring 09	ARCH 502-205 Design Studio II
		ARCH 722-001 Advanced Drawing
	Fall 08	ARCH 501-201 Design Studio I
	Spring 08	ARCH 722-001 Advanced Drawing
Educational Credentials:	1995	M. Arch, Columbia University
	1991	Bachelor of Environmental Design, Texas A&M University
Teaching Experience:	2004-2009	Lecturer, University of Pennsylvania
	2000-2004	Adjunct Professor, Columbia University
	2000-2004	Visiting Critic, Pratt Institute
Professional Experience:	2008	Taekwondo Park competition, collaboration with Weiss / Manfredi: 1st Prize
	2008	Flabella 2, Table prototype
	2007	Flabella, Table prototype, Membrane casting
	2006	La Accademia, Bridge Competition, Venice Italy
	2005	Giants Causeway Competition, Ireland
	2005	Orbigraphia, Brooklyn, NY
	2002	Deckscape, Brooklyn, NY
	1999	SPF 54, New York, NY
	1998	(P)article House, New York, NY
	1994-2004	Project Leader, RUR Architecture PC, Reiser + Umemoto, NY, NY
	1998-0000	Project Designer & Project Manager, Hanrahan & Meyers Architects
	1995-1997	Designer, Bernard Tschumi Architects, NY, NY
Licenses / Registration		None
Selected Publications:	2008	*Natural Models: the Cultivation of Material Intelligence, ASCA Fall Conference, Material Matters, p p310-316.*
	2008	306090. *The Sensation of Deep & Cryptic Models: The Widmanstätten Pattern.* Vol 10, pp112-115,
	2007	Synsedimentary Structures Research Pamphlet, Penn Design, exhibited at the AIA New York School Show, 152 pgs.
	2005	Wild Bits, Exhibition 4 Gallery, Catalog Intro*. Repeat After Me, Return.* June
Professional Memberships:	2008-prsnt	ASCA
	2000-prsnt	Architectural League of New York

Ruy, David		Full Time Lecturer
Courses Taught:	Fall 09	
	Spring 09	ARCH 704-207 Design Studio IV ARCH 744-002 Digital Fabrication
	Fall 08	
	Spring 08	
Educational Credentials:	1996	M. Arch, GSAPP, Columbia University
	1991	B. Arch, St. John's College, Annapolis
Teaching Experience:	2002-9	Lecturer, University of Pennsylvania
	2000	Adjunct Assistant Professor, Columbia University
	1998-1996	Instructor, Columbia University
Professional Experience:	2000	Director, Ruy Klein
	1997-9	Designer, Reiser + Umemoto
	1996	Consultant, Reiser + Umemoto Consultant, Stan Allen
Licenses / Registration		None
Selected Publications:	2006	"More Than a Surface, Less than a Volume," Catalog Essay, H-Edge exhibition at Artist Space, NYC, NY
	2005	"Artificial Sky," New Architecture, issue 8 "Rogue Wave," Urbanisms, Pace University, NY, pp 14-15
Professional Memberships:		None

Rybczynski, Witold		Professor
Courses Taught:	Fall 09	ARCH 715-002 Writing on Architecture
	Spring 09	ARCH 762-001 Design and Development
	Fall 08	ARCH 715-002 Writing on Architecture
	Spring 08	ARCH 762-401 Design and Development
Educational Credentials:	1972	M. Arch, McGill University
	1966	B. Arch, McGill University
Teaching Experience:	1993-	Professor (tenured), University of Pennsylvania
	1973-93	Professor, McGill (1986-93); Associate Professor (1980-1986, tenured, 1981), McGill; Assistant Professor, McGill (1975-80); Research Associate, McGill (1973-75).
Professional Experience:	1996	Villa Quattro Stagioni (project)
	1993	Two Cottages, Carillon Beach, Florida (with Melanie Taylor)
	1992	Markham Charrette, Housing Consultant, Duany & Plater-Zyberk
	1991	P/A Affordable Housing Competition (with Melanie Taylor)
	1990	The Grow Home housing prototype (with Avi Friedman)
Licenses / Registration	1970-82	Order of Architects of Quebec
Selected Publications:	2009	*My Two Polish Grandfathers: and Other Essays on the Imaginative Life,* Scribner, New York. (228 ps.)
		Last Harvest: How a Cornfield Became New Daleville: Real Estate Development in America from George Washington to the Builders of the Twenty-First Century, and Why We Live in Houses Anyway, Scribner, New York, April 2007. (309 ps.) Scribner Paperback, New York, 2008.
		Vizcaya: An American Villa and Its Makers (with Laurie Olin), University of Pennsylvania Press, Philadelphia, 2006. (274 ps.)
Professional Memberships:		Member, United States Commission of Fine Arts 2004-present; Academic Adviser, A.T. Kearney/Chicago Council on Global Affairs/Foreign Policy, "Global Cities Index," 2008-present; Jury member, ULI J. C. Nichols Prize, 2007-2009; Member, Council of Advisors, Institute of Classical Architecture & Classical America, 2003-present; Advisory Board, Library of American Landscape History, 2002-present.

Sabin, Jenny		Full Time Lecturer
Courses Taught:	Fall 09	ARCH 745-001 Nonlinear Systems Biology & Design
	Spring 09	ARCH 741-002 Experiments in Design Techniques
	Fall 08	ARCH 501-203 Design Studio I
		ARCH 745-001 Nonlinear Systems Biology & Design
	Spring 08	ARCH 741-002 Experiments in Design Techniques
		ARCH 704-204 Research Studio with Cecil Balmond
Educational Credentials:	2005	M.Arch (Hons), University of Pennsylvania
		B.F.A. Ceramics, University of Washington, cum Laude
		B.A. Interdisciplinary Visual Art, University of Washington, cum Laude
Teaching Experience:	Fall06-prsnt	Full-time Lecturer, University of Pennsylvania
	2005	Part-time Lecturer, University of Pennsylvania
Professional Experience:	2005–prsnt	Director, CabinStudio+, Philadelphia PA
	May-Sept, 2006	Project Designer and Project Manager, Advanced Geometry Unit, Arup, London, U.K.
	2005 – Spring	Production Team, 'Grotto' project, Aranda/Lasch for MOMA PS1 Young Architects Program
	2004 – 06	Lead Project Designer, w/ Annette Fierro and Penn Praxis, Philadelphia, PA
	1998 – 02	Director, Sabin Studio, Seattle, WA
	1998 – 02	Director of Admissions, Seattle Art Museum, Seattle, WA
Licenses / Registration		None
Selected Publications:	2009	(forthcoming) Kolatan and Sabin, a book on parametric design strategies in research, teaching and practice, Bentley Publications and RIBA Press, Exton, PA, USA.
	2009	Day, Martyn. "Smart Geometry 09", AEC Design, Management & Collaboration in the Built Environment, published on-line June.
	2009	Nikolovska, Lira. "The Design + Computation Gallery at Siggraph 2008", Journal of Mathematics and the Arts, 01 March. Taylor & Francis, pp. 41-55.
	2009	Abbott A. "Science arts centre opens in a blaze of colour: Gallery launches Linz as European City of Culture" (featuring work by Sabin in collaboration with LabStudio). Nature. Published online Jan 5. http://www.nature.com/news/2009/090105/full/news.2009.0.html
	2009	Malmborg, Lone. Ed. "Siggraph 2008 Design and Computation Gallery Report", Digital Creativity, Vol. 19, #4, Routledge, Taylor and Francis Group, pp. 256-264, London, UK.
Professional Memberships:	2007-prsnt	Member and Senior Tutor, Smart Geometry International Group
		Member, Institute for Medicine and Engineering
		Member, NYC Design Computation Group
		Board Member, Esther Klein Art Gallery, University City Science Center
	2006-prsnt	Senior Researcher, Nonlinear Systems Organization

Schmidt-Ullrich, Alexandra — Lecturer

Courses Taught:	Fall 09	
	Spring 09	ARCH 726-101 Furniture Lab
	Fall 08	
	Spring 08	ARCH 726-101 Furniture Lab
Educational Credentials:	2000	Masters in Architecture, Graduate School of Fine Arts, University of Pennsylvania
	1997	Bachelor of Fine Arts. Major: Interior Design, James Madison University
Teaching Experience:	2005-Prsnt	Full-time Lecturer, University of Pennsylvania, Philadelphia PA
	2002-Prsnt	Design Faculty/Coordinator: Penn Summer Art and Architecture Studios
	F 08	Studio Lecturer, Undergraduate Architecture Program, Temple University,
	F 07-SP 08	Philadelphia, PA
	05/07/09	Studio Lecturer, Undergraduate Architecture Program, Lehigh University, Bethlehem, PA
		Umbau School of Architecture, Staunton VA and Vienna Austria (summer)
Professional Experience:	2007-Prsnt	Design Collaborative, Scott White, Jeff D'Aquila, Alexandra Schmidt-Ullrich
	2003-6	Cedar Hill Residence, Crozet VA.
	2004-8	MGA Partners, Architects, Philadelphia PA.
	2002-5	Zangrilli Designs, Philadelphia PA.
	2002-4	Axis Models, Philadelphia PA.
	1999	RTKL, Baltimore MD. Summer Intern and Fellow
	1998	Ballinger, Philadelphia PA.
	1996	Architectural Design Inc., Orleans MA.
	1995	Bahlo Kohnke Stosberg und Partner, Hannover Germany.
	1994	Boynton Rothschild Rowland Architects, Richmond VA.
	2005-9	Consulting work (): Purdy O'Gwynn Architects, Brett Weber Architects, Ballinger, The Ritz Carleton and others
Licenses / Registration		None
Selected Publications:	2008	Class of 2008 Senior Book, a compiled collection of work from the graduating class, Lulu.com, 2008
	2004-8	Women's Committee of the PMA Holiday Card Competition
	2003	A House for Albrecht Durer Competition Catalog
	2002	MOVE Site Proposal, project and text in MOVE: Sites of Trauma by Johanna Dickson, Pamphlet #23 2002
	1998	Published photographs, sketches and text in Vienna Studio: 01
Professional Memberships:		None

Snooks, Roland — Lecturer

Courses Taught:	Fall 09	ARCH 743-001 Form and Algorithm
	Spring 09	ARCH 704-204 Design Research Studio
	Fall 08	ARCH 501-204 Design Studio I
	Spring 08	ARCH 743-001 Form and Algorithm
Educational Credentials:	2005-2006	Master of Science in Advanced Architectural Design (Honors Award for Excellence in Design), Columbia University, GSAPP
	2001-2003	Bachelor of Architecture, First Class Honors, RMIT University
	1999-2000	International Exchange Program, L'Ecole D'Architecture Paris Val De Marne, France
	1996-1998	Bachelor of Applied Science in Environmental Design, University of Canberra
	1997-1998	Cross Institutional Study in Art History, Australian National University
Teaching Experience:	2008-2009	Lecturer, University of Pennsylvania
	2006-2009	Adjunct Assistant Professor, Columbia University
	2007-2008	Adjunct Assistant Professor, Pratt Institute
	2008	Visiting Design Faculty, SCI-Arc – Southern California Institute of Architecture
	2008	Lecturer, UCLA
	2003-2005	Adjunct Design Faculty, RMIT University
Professional Experience:	2004-present	Founding Partner, Kokkugia, London + New York Design Architect, Reiser + Umemoto, RUR Architecture, New York
	2006-2007	Graduate Architect, Ashton Raggatt McDougall, Melbourne
	2004-2005	Graduate Architect, Minifie Nixon Architecture, Melbourne
	2001-2004	Designer, Kovac Architecture, Melbourne, Australia
	2001-2002	Student Architect, Daryl Jackson Alastair Swayn, Canberra, Australia
	1999-2001	
Licenses / Registration		None
Selected Publications:	2008	Leach, Neil, AD: Digital Cities, "Swarm Urbanism" + "Digital Towers", Wiley, London, (forthcoming: July 2009).
	2008	Leach, Neil & Xu Wei-Guo (Eds.) (Im)material Processes: Architectural Biennale Beijing.
	2008	Sebastian Cichocki, Jakub Szczęsny, Krzysztof Nawratek (Ed.) "iSaw", Synchronicity, BEc Zmiana Foundation, Warsaw.
	2008	Ballesteros, Jose. Pasajes Arquitectura y critica, 100% Arquitectura Contemporanea, America Iberica, Madrid.
	2008	Richards, Morgan, 'Kokkugia - iSaw', IconEye, Online design journal, London.
	2008	Stoichkova, Adriana (Ed.), Detaili, issue 01, 2008, QM Media, Sofia, Bulgaria.
	2007	Snooks, Roland. "Observations on the algorithmic emergence of character." Models, 306090, Volume 11, Ed. Emily Abruzzo, Eric Ellingsen, Jonathan D.Solomon. New York, 306090 Inc,.
	2007	Liu, Yu-Tung (Ed.), Distinguishing Digital Architecture, 6th International Digital Architecture Award, Birkhäuser.
	2007	Mario Antonio Arnaboldi, "Agora / Dreams And Visions." L' Arca No. 227, 2007. Italy, L'Arca Editions.
Professional Memberships:		None

Solway, Joe		Lecturer
Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	ARCH 638-001 Building Acoustics
Educational Credentials:	1997	M.Sc. Sound and Vibration Studies, University of Southampton UK, Institute of Sound and Vibrational Research (ISVR)
	1996	B.Sc. Physics (Hons), University of Birmingham UK, School of Physics and Space Research
Teaching Experience:	2008-09	University of Pennsylvania, School of Architecture, Acoustics 6-week course
	2008-09	Columbia University, Building Engineering – Acoustics Class
Professional Experience:	1997-prsnt	Arup, Acoustic Consultant
Licenses / Registration		None
Selected Publications:		None
Professional Memberships:		Acoustical Society of America

Steinhardt, Nancy S. Professor (School of Arts and Sciences)

Courses Taught:	Fall 09	
	Spring 09	EALC 629-401 Chinese Architecture
	Fall 08	ARCH 718-401 Japanese Architecture
	Spring 08	
Educational Credentials:	1981	Harvard, Ph. D.
	1975	Harvard, M.A.
	1974	Washington University, A.B.
Teaching Experience:	1998-prsnt	Professor, University of Pennsylvania
	1991-1998	Associate Professor, University of Pennsylvania
	1986-1991	Assistant Professor, University of Pennsylvania
	1982-1986	Lecturer, University of Pennsylvania
	1981-1983	Lecturer, Bryn Mawr
	1981-1982	Lecturer, University of Delaware
Professional Experience:	1998-prsnt	Curator of Chinese Art, University of Pennsylvania
	1991-1998	Associate Curator of Chinese Art, University of Pennsylvania
Licenses / Registration		None
Selected Publications:	In press	Chinese Architecture and the Beaux Arts (University of Hawaii, 2010)
	2008	"China's Earliest Mosques," Journal of the Society of Architectural Historians 60, 4, pp. 537-548
	2007	"Yuan Dynasty Tombs and Their Inscriptions," Ars Orientalis 37
	2007	"Shishi, a Stone Structure Associated with Abaoji in Zuzhou," Asia Major 19, 1-2, pp. 241-266
	2006	"The Architectural Landscape of Liao and Underground Resonances," in Gilded Splendor: Treasures of China's Liao Empire, New York: Asia Society, pp. 41-53
Professional Memberships:		College Art Association Society of Architectural Historians Association for Asian Studies Society for Research in East Asian Architecture Japan Art History Forum Historians of Islamic Art Song-Yuan Studies Phi Beta Kappa

Timberlake, James — Adjunct Professor

Courses Taught:	Fall 09	
	Spring 09	ARCH 704-205 Research Studio
	Fall 08	
	Spring 08	ARCH 704-205 Research Studio
Educational Credentials:	1977	M. Arch, University of Pennsylvania
	1974	Bachelor of Environmental Science, Architecture, *with Honors* University of Detroit
Teaching Experience:	2008-2010	Mithun/Russell Family Foundation, Endowed Professor in Sustainability, University of Washington, *(in collaboration with Stephen Kieran)*
	2002-Prsnt	Adjunct Professor, University of Pennsylvania *(in collaboration with Stephen Kieran)*
	2004	Max Fisher Visiting Chair, University of Michigan *(in collaboration with Stephen Kieran)*
	1998	Masters Studio Visiting Professor, Syracuse University, *(in collaboration with Stephen Kieran)*
	1994	Eero Saarinen Distinguished Professor of Design, Yale University, *(in collaboration with Stephen Kieran)*
	1985-89	Visiting Professor, Princeton University, Undergraduate Program
	1985	Visiting Studio Professor, Pennsylvania State University
	1984	Visiting Studio Professor, University of Texas at Austin
	1981	Studio Professor, University of North Carolina at Charlotte
Professional Experience:	1999–Prsnt	Partner, KieranTimberlake
	1984–99	Partner, Kieran, Timberlake & Harris
	1977-84	Venturi, Rauch and Scott Brown, *(Associate 1983-84)*
	1976-77	Architect, Louis Sauer Associates
Licenses / Registration	Various	PA, DE, NJ, NY, MD, VA, NC, MI;
	1982	NCARB Certificate No. 28208
Selected Publications:	2008	Loblolly House: Elements of a New Architecture. New York: Princeton Architectural Press
Professional Memberships:		BuildingEnvelopes.org, Consortium Partner, Harvard University Center for Design Infomatics and the MIT Building Technology Group
		House N Research Group, Open Source Building Alliance, MIT
		The Athenaeum of Philadelphia
		Artspace Collaborative, Board Member, Philadelphia
		American Institute of Architects, College of Fellows
		Pennsylvania Society of Architects

VanDerSys, Keith — Lecturer

Courses Taught:	Fall 09	LARP 543-001 Media III: Digital Media
	Spring 09	ARCH 502-204 Design Studio II
		LARP 740-001 Topics in Digital Media: Digital Fabrication
	Fall 08	LARP 543-001/002 Media III: Digital Media
	Spring 08	
Educational Credentials:	2004	MA, Critical Studies in Architectural Culture, University of California, Los Angeles
	1994	BA, University of Detroit
Teaching Experience:	2004 – 07	Lecturer in Architecture, University of Michigan, Taubman College of Architecture + Urban Planning (TCAUP)
	2003 – 04	University of California, Los Angeles Teaching Assistant, History of Modern Architecture Teaching Assistant, Comprehensive Studio
	2000 – 02	Instructor in Architecture, Boston Architectural Center Graduate and undergraduate advanced option studios
Professional Experience:	2004-prsnt	PEG office of landscape + architecture, founding partner
	1999 – 2002	Ellenzweig Associates, Inc., Cambridge MA, Project Designer/ Project Architect
	1997 – 1999	William Rawn Associates, Inc., Boston MA, Project Designer/ Project Architect
	1996	Assemblage, Royal Oak MI, Architecture Intern
	1995	Kessler Associates, Inc., Detroit MI, Architecture Intern
Licenses / Registration		None
Selected Publications:	2009	*Advanced Public Design* (DAMDI Publishing, Korea), p. 206- 07; p.596- 99; p. 694- 97; p.764- 67; p.872- 87
	2008	"Remarkable Landscape Architects," Hyosoon-Ki, *ELA environment & landscape architecture of Korea* (August), v. 244: 59
	2008	"Double Jeopardy," *1000x Architecture of the Americas* (Verlagshaus Braun), p. 123-124
	2008	"Mies Plaza," *Urban Spaces: Squares & Plazas* (Barcelona: Carles Broto), p. 144-151
	2007	53rd Annual Design Review, *ID Magazine* (July/August): 147
	2007	"Emerging practices," *Architectural Record* (January): 41-42
	2007	"28th Annual Interiors Awards," *Contract Magazine* (January): 96-99
	2006	**"**Double Jeopardy" & "Almost Nothing," *2006 BAQ Pan-American Biennale* (Colegio de Arquitectos del Ecaudor, Provincial de Pichincha), p. 60-63, 78-81
	2006	"Material World," *Azure* (July/August): 106
	2006	"Relaxing at OM," Heather Mikesell, *American Spa:* 84-86
	2005	"Mies van der Rohe Plaza," Alicia Velazquez, *A+T In Common II*, 26 (Autumn): 56-63.
Professional Memberships:	2003-prsnt	American Indian Council of Architects and Engineers (AICAE)
	1999-prsnt	NCARB

Varnelis, Kazys — Lecturer

Courses Taught:	Fall 09 Spring 09 Fall 08 Spring 08	 ARCH 712-006 Network Culture
Educational Credentials:	1994 1990 1988 1986	Ph. D. Cornell University, History of Architecture and Urbanism M. A. Cornell University, History of Architecture and Urbanism, B. S. Cornell University, History of Architecture and Urbanism, A. A., Simon's Rock College of Bard, Associate of Arts in Social Sciences
Teaching Experience:	2006-prsnt 2005-prsnt 2004-2006 1996-2005	Director, Network Architecture Lab / Adjunct Assistant Professor, Columbia University Senior Lecturer, History and Theory, School of Architecture, University of Limerick, Ireland Adjunct Faculty, Public Art Studies Program, University of Southern California, Faculty, History and Theory of Architecture, Southern California Institute of Architecture
Professional Experience:	2001-prsnt 2005-2006	Principal, AUDC Annenberg Center for Communication, University of Southern California, Visiting Scholar/Senior Research Associate, "Networked Publics" Group
Licenses / Registration		None
Selected Publications:	2008 2008 2008 2007	editor, *The Philip Johnson Tapes: Conversations with Robert A. M. Stern,* (New York: Monacelli Press and the Temple Hoyne Buell Center for the Study of American Architecture) editor, *Networked Publics,* (Cambridge, MA: The MIT Press) editor, *The Infrastructural City: Networked Ecologies in Los Angeles,* (Barcelona: ACTAR, 2008) co-author [with Robert Sumrell] as AUDC, *Blue Monday: Stories of Absurd Realties and Natural Philosophies* (Barcelona: ACTAR)
Professional Memberships:		None

Veikos, Cathrine — Assistant Professor

Courses Taught:	Fall 09	ARCH 601-201 Design Studio III ARCH 621-101 Visual Studies III
	Spring 09	ARCH 522-101 Visual Studies II ARCH 632-401 Surface/Effects
	Fall 08	ARCH 521-101 Visual Studies I ARCH 601-201 Design Studio III ARCH 621-101 Visual Studies III
	Spring 08	ARCH 522-101 Visual Studies II ARCH 632-401 Surface/Effects
Educational Credentials:	1989	M Arch, Harvard University Graduate School of Design
	1985	Bachelor of Arts, Barnard College, Columbia University
Teaching Experience:	1999-prsnt	Associate Professor (2003-prsnt); Lecturer (1999-2003), Department of Architecture, University of Pennsylvania
	2003, 2005	Cass Gilbert Fellow and Visiting Professor, Architecture, University of Minnesota, College of Architecture and Landscape Architecture
	1998	Studio Professor, College of Architecture, Illinois Institute of Technology
	1996	Visiting Assistant Professor, School of Architecture, Tulane University
	1995	Visiting Lecturer, Architecture, University of Pennsylvania
	1993	Instructor, Parsons School of Design, Paris, France
	1985-1989	Research and Teaching Fellowships, Harvard
	1988	Studio Instructor, Career Discovery Program (summer)
Professional Experience:	1987-prsnt	Principal, Cathrine A. Veikos, Architect
	1993-1997	Principal, atelier 4 Architecture (a4A)
	1992	Projecteur, Francois Viguier & Associés, Paris, France
	1991	Projecteur, Roland Simounet, Architecte, Paris, France
	1989-1991	Designer, Bruce Graham Studio, Skidmore, Owings & Merrill, Chicago, IL
Licenses / Registration		NJ, NY
Selected Publications:	None	Cathrine Veikos, “Intricate Networks,” INTRICACY : A Project by Greg Lynn Form, Catalog and Collected Essays - edited by Cathrine Veikos. Preface, p.1-6, p.25-33, completed manuscript, unpublished.
	2007	Cathrine Veikos, “Technical Provocations- The Changing Role of Representation” European Association of Architectural Education (EAAE).
	2006	Cathrine Veikos, “To Enter the Work: Ambient Art” in Journal of Architecture Education, (JAE) Special Issue: Installation Art, Vol. 59 (4), Blackwell Publishing, p. 71-80.
	2005	Cathrine Veikos, “The Post-Medium Condition” in Digital Design: the quest for new paradigms, eCAADe n. 23, edited by Jose Pinto Duarte, Goncalo Ducla-Soares and A. Zita Sampaio, Lisbon: Universidade Tecnica de Lisboa. p. 787-794.
Professional Memberships:		Association of Collegiate Schools of Architecture Women’s Leadership Council Habitat Founders Fund Member, Habitat for Humanity International American Association of University Women Barnard College Alumni Association PennPro Women, Member of the Board 2004-2006

Vesely, Dalibor		Visiting Professor
Courses Taught:	Fall 09	
	Spring 09	ARCH 712-002 Transformation of the European City
	Fall 08	
	Spring 08	ARCH 712-002 Transformation of the European City
Educational Credentials:	1983	MA, Cambridge
	1965	PhD, History of Architecture, Prague, Munich
	1962	Diploma in Architecture, Prague
	1958	Diploma in Engineering, Prague
Teaching Experience:	1992-prsnt	Co-founder and Permanent Visiting Professor, Central Europoean University, Prague
	1991-prsnt	Visiting Professor, University of Pennsylvania and Harvard University
	1990	Head of the International Course on Modern Architecture, G.I.T., Atlanta
	1989	Distinguished Visiting Professor G.I.T., Atlanta
	1988-91	Consultant and Critic, Staedelschule Frankfurt A.M.
	1988-prsnt	Director of MPhil program History and Philosophy of Architecture, Cambridge
	1987	Visiting Professor, Royal Academy, Stockholm and Harvard
	1986	Visiting Critic and Lecturer, Centre for Modern Art, La Coruna, Spain
	1984	Co-director of MPhil Course History and Philosophy of Architecture, Cambridge
	1982-85	Visiting Critic, Harvard University Visiting Critic, University of Houston
	1982	Visiting Critic, Carleton University, Ottawa, Canada
	1981-83	4th and 5th year Convenor, Department of Architecture, Cambridge
	1980-81	Teaching on Urban Development (inner city), Frankfurt A.M.,
	1979	Germany J. Soltan Lecturer, Harvard University, Cambridge, MA
	1978-88	Visiting Critic, Cranbrook Academy, Detroit
	1975-76	University Lecturer, University of Cambridge Visiting Lecturer, Princeton University
Professional Experience:	1968-78	Part-time consultancy in design
	1963-68	Consultant in the Institute for the Protection of Old Monuments
	1962-63	Assistant director of the reconstruction of the inner city of Eger, Bohemia
	1959-62	Part-time architectural practice
Licenses / Registration		None
Selected Publications:	2004	Architecture in the Age of Divided Representation, the question of creativity in the shadow of production MIT Press, Cambridge, MA. 'Modernity and the question of representation', *Tracing Modernity, Manifestation of the Modern in Architecture and the City*. Routledge, London.
Professional Memberships:		AA (Architectural Association, London)

Weiss, Marion — Professor

Courses Taught:	Fall 09	
	Spring 09	ARCH 704-202 Research Studio VI
	Fall 08	
	Spring 08	ARCH 704-204 Research Studio VI
Educational Credentials:	1984	M. Arch, Yale University
	1979	BS. Arch, University of Virginia
Teaching Experience:	1991-prsnt	Graham Chair Professor of Architecture (2006-prsnt); Associate Professor (1997); Assistant Professor (1991-1997), University of Pennsylvania
	1995	Gensler Distinguished Visiting Critic, Cornell University
	1995	Visiting Critic for Advanced Studio, Yale University
	1988-1991	Assistant Professor, School of Architecture, University of Maryland
	1982-1983	Teaching Assistant, Yale University
Professional Experience:	1989-prsnt	Principal, Weiss/Manfredi Architects
Licenses / Registration	1986–prsnt	RA: NY
Selected Publications:	2009	Pro Architect (monograph on Weiss/Manfredi: November) By Marion Weiss, Michael Manfredi; Foreword by Peter Re
	2009	and Dr. Yoon Kyung Choi
	2009	Urban Space Design, "Temporal Infrastructures" by Marion Weiss, Michael Manfredi, and Patrick Armacost
	2007	Landscape Architecture China, "The Space Between Art and Landscape: An Evolving Terrain" by Marion Weiss and Michael Manfredi
	2000	*Weiss/Manfredi: Surface/Subsurface* (publication date: December 2007), By Marion Weiss and Michael Manfredi, Princeton Architectural Press
	1996	*Site Specific: The Work of Weiss Manfredi Architects*, By Marion Weiss and Michael Manfredi, Princeton Architectural Press, Foreward by Terry Riley, Chief Curator, the Museum of Modern Art
		The Sex of Architecture, M Weiss author of "Underestimated Sites: The Women's Memorial at Arlington Cemetery:, Abrams Books
Professional Memberships:		Member: The Architectural League, New York, NY
		Member: Young Architects Forum at the League: NY
		Member: Urban Design Forum, NY
		Member: The Van Alen Institute, New York, NY
		Member: Storefront for Art and Architecture, New York, NY
		Member: American Institute of Architects
		Affiliate Member: American Society of Landscape Architects
		Member: New York, New Visions

Weller, Jonathan		Lecturer
Courses Taught:	Fall 09	
	Spring 09	ARCH 768/REAL 821-402 Real Estate Development
	Fall 08	
	Spring 08	ARCH 768/REAL 821-402 Real Estate Development
Educational Credentials:	1970	MBA, Columbia University
	1968	BA, Williams College
Teaching Experience:	2007-prsnt	Lecturer, Wharton, University of Pennsylvania
Professional Experience:	1970-1994	Eastdil Realty, Inc.
	1994-2006	Pennsylvania Real Estate Investment Trust
	2006-prsnt	Director, Penn Virginia GP Holdings, LP
	2007-prsnt	Director, AMREP Corporation
Licenses / Registration		None
Selected Publications:		None
Professional Memberships:		National Association of Corporate Directors Urban Land Institute

Yi, Yun Kyu — Lecturer (now Asssitant Professor)

Courses Taught:	Fall 09	ARCH 631-001 Technical Case Studies
	Spring 09	ARCH 632-002 Simulation and Design
	Fall 08	
	Spring 08	
Educational Credentials:	2008	Ph.D., Architecture, School of Design, University of Pennsylvania
	2005	M.S., Architecture, School of Design, University of Pennsylvania
	2001	M.S., Architectural Engineering, Department of Architectural Engineering, Yonsei University
	1995	B.S., Architectural Engineering, Department of Architectural Engineering, Hong-Ik University
Teaching Experience:	2003-present	Assistant Professor (2009-prsnt); Lecturer (2007-2009); Teaching Assistant
	Fall 2002	(2003-6), Department of Architecture, University of Pennsylvania
		Lecturer, Department of Architectural Engineering, WooSong University,
	Fall 2002	Korea
		Lecturer, Department of Architectural Engineering, ChungCheong Collage,
	Spring 1997	Korea
		Teaching Assistant, Department of Architectural Engineering, Yonsei University, Korea
Professional Experience:	2005 – Present	Researcher, Penn-Tsinghua T. C. Chan Center for Building Simulation and Energy Studies, University of Pennsylvania
	2002 – 2005	Researcher, Building Simulation Group, School of Design, University of Pennsylvania
	1997 – 2000	Construction manager, Paradise Construction Industrial, Seoul, Korea
	1995 – 1997	Assistant researcher, Advanced Building Science and Technology Research
	1993 – 1994	Center, Yonsei University, Korea
		Architect intern, Mooyoung Architects & Engineers, Seoul, Korea
Licenses / Registration	2006	LEED (Leadership in Energy & Environmental Design) Accredited Professional
	1995	1st grade licensed Architectural Engineer, Korea
Selected Publications:	2009	Yi Y, Malkawi A, “Optimizing building form for energy performance based on hierarchical geometry relation,” In: Auto-mation in Construction Journal, Elsevier, The Netherlands, doi:10.1016/j.autcon.
	2008	Yi Y, Malkawi Ali, “Site-Specific Prediction for Energy Simulation by Integrating Computational Fluid Dynamics,” In Building Simulation An International Journal Tsinghua Press, Vol. 1(3):270-277
	2005	Malkawi Ali, Yi Y, Lewis Geoffrey “An integrated evaluation for photovoltaic installation” In Journal of Architectural Engi-neering, American Society of Civil Engineers(ASCE), Vol. 11(4):131-138
	2005	Malkawi A, Srinivasan R, Yi Y, Choudhary R.,“Decision support and design evolution: Integrating Genetic Algorithms, CFD and visualization” In: Automatio in Construction Journal, Elsevier, The Netherlands, Vol. 14(1): 33-44.
Professional Memberships:	2008–prsnt	Assoc. AIA, American Institute of Architects
	2007–prsnt	Member, International Building Performance Simulation Association (IBPSA).
	2006-prsnt	Member, U.S. Green Building Council, Delaware Valley Chapter.

Zucker, Guy — Lecturer

Courses Taught:	Fall 09	
	Spring 09	ARCH 602-202 Design Studio IV
	Fall 08	
	Spring 08	ARCH 502-202 Design Studio II
Educational Credentials:	2001-2	Master of Science in Advanced Architectural Design, Columbia University
	1994-9	B. Arch, Technion Institute of Technology, Haifa
	1998	History, The Hebrew University, Jerusalem
	1997	Industrial Design, Bezalel Academy of Art, Jerusalem
	1990	Photography, Camera-Obscura school, Tel-Aviv
Teaching Experience:	2006-9	Lecturer / Studio Critic, University of Pennsylvania
	2005	Assistant Studio Critic with Lot-Ek, Graduate School of Architecture, Parsons School of Design
	2004-5	Assistant Studio Critic with Lot-Ek, Graduate School of Architecture, Columbia University
	2001	Teacher's Assistant with: Reinhold Martin, Mark Cousins, Mary McLeod, Stan Allen, Graduate School of Architecture, Columbia University
Professional Experience:		10 Years
Licenses / Registration		Registered Architect in NY State and Israel
Selected Publications:		Books:
	2009	Space X Files, Café Grumpy, LaGuardia Salon, 1st Floor Penthouse, Rihan Publishing, Hong Kong
	2008	100x400, Prague Library, Stockholm Library, Swell House, Rihan Publishing, Hong Kong
	2008	One Off, Delicatessen / Clare Dowdy, Laurence King Publishing, London
		City Guide Tel Aviv, Delicatessen / Lisa Goldman, Crossfields Publishing, Tel Aviv
	2007	Dress Code, Delicatessen / Shonquis Moreno, Frame Publishers + Birkhauser, Amsterdam, Basel, Boston, Berlin
	2006	
		Periodicals:
	2009	Exhibitor Magazine / May – Tube Tops / Brian Todd, Rochester, MN
	2009	Interior Design / April – Off the Wall, Shanghai
	2009	a+d+m / April – Digital Primitives / Caterina Tiazzoldi, Milan
	2009	Israel Architecture / February – 1st Floor Penthouse / Ami Ran, Tel Aviv
	2008	Wall Paper / August – Swell House, London
	2008	Architecture Plus / Issue 19 – A Building for Books / Rashid Taqui, Dubai
	2008	Architectural Record / April – Swell House / David Sokol, New York
	2008	Architect's Newspaper / April 16 – Restaurant Row / Jeff Byles, New York
	2008	Mark Magazine / Vol.12 – Swell House / David Keuning, Amsterdam
	2008	eOculus – Off The Wall, www
	2008	We-Ar / Vol.13 – Delicatessen, Berlin
	2008	Artis – Off The Wall, New York

4.5 Visiting Team Report from the Previous Visit

National Architectural Accrediting Board, Inc.

July 24, 2004

Amy Gutmann, Ph.D., President
University of Pennsylvania
Office of the President
100 College Hall
Philadelphia, PA 19104

NAAB

Dear Dr. Gutmann:

At the July 2004 meeting of the National Architectural Accrediting Board (NAAB), the board reviewed the Visiting Team Report for the University of Pennsylvania Department of Architecture. As a result, the professional architecture program:

Master of Architecture (3 years)

was formally granted a six-year term of accreditation. The accreditation term is effective January 1, 2004. The program is scheduled for its next accreditation visit in 2010.

1735 New York Avenue, NW
Washington, DC 20006
www.naab.org
tel 202.783.2007
fax 202.783.2822
email info@naab.org

Accreditation is subject to the submission of Annual Reports. Annual Reports are due by June 1 and must include a response to each condition identified as not met in the Visiting Team Report, a response to each of the causes of concern in the Visiting Team Report, a brief summary of changes that have been made or may be made in the accredited program, and the two-page statistical report. If an acceptable Annual Report is not submitted to the NAAB by the time of its fall board meeting, the NAAB may consider advancing the schedule for the program's next accreditation sequence. A complete description of the Annual Report process can be found on pages 41-42 of the *1998 Conditions and Procedures*. (Changes to the process are included in the *2002 Addendum to the 1998 Conditions and Procedures*.)

NAAB encourages public dissemination of information about each school contained in both the school's Architecture Program Report and the Visiting Team Report. If the Visiting Team Report is made public, then it is to be published in its entirety.

The visiting team has asked me to express its appreciation for your gracious hospitality.

Very truly yours,

Joseph P. Giattina, Jr.

Joseph P. Giattina, Jr., FAIA
President

cc: Bellef Merlins, Chair
Donna V. Robertson, AIA, Team Chair
Visiting Team Members

University of Pennsylvania
Department of Architecture

Visiting Team Report

Master of Architecture (3 years)

The National Architectural Accrediting Board
March 31, 2004

The National Architectural Accrediting Board (NAAB), established in 1940, is the sole agency authorized to accredit U.S. professional degree programs in architecture. Because most state registration boards in the United States require any applicant for licensure to have graduated from an NAAB-accredited program, obtaining such a degree is an essential aspect of preparing for the professional practice of architecture.

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I. Summary of Team Findings

1. Team Comments

The Architecture program at the University of Pennsylvania profits from a productive and valuable faculty, an energetic and intelligent student body, and a caring, durable staff. Its recent progress to establish new administrative leadership, faculty ranks' renewal, the curricular agenda, and a widened perspective has opened an era of new promise. The program is fortunate to be situated in a stellar university on one of its best corners, enjoying adjacency to the Fine Arts and Main Libraries and across from Walnut Street's busy commercial district.

Students possess strong graphic and analytic skills, are articulate, and enjoy the opportunity for intellectual and creative development. Their studies are supported by excellent learning and making resources. The interdisciplinary setting encourages study in other related disciplines, and more dual degrees are now supported. Students are exposed to a wide range of significant lecturers and visitors, and many have the opportunity to study abroad. There is a respect for innovation and advanced technologies, with many expecting to become architects, but also interested in the reaches of architectural creativity beyond traditional practice. Scholarship and research are encouraged, exploration and risk are undertaken, and the graduates appear to have wide opportunities for successful careers.

Meyerson Hall continues to present challenges, especially as enrollment has crept up in recent years. A strategy for continual renovation and greater efficiencies of space use should be in place as soon as possible. Many call for a new building, but given the fundraising horizon and the current ideal campus location of the existing facility, this may not be a reasonable dream.

The faculty represents both continuity with Penn Architecture's traditions of scholarship in history and theory and new perspectives on the materiality and sustainability of buildings. The exploratory studio atmosphere results in excellent work; the adjacent coursework is serious in all but a few topic areas. Especially impressive is the thinking about materials, building assemblies, structures, and innovative technologies. Students produce an abundance of work, and their energy must be a direct result of their teachers' talents. The faculty has been joined by recognized, senior practicing architects and by younger, rising practitioners lending a currency to the design work at Penn.

The program would profit from more visibility to the high-quality work being done by students and the faculty. The current Strategic Plan recognizes this and has sound plans that systematically address a comprehensive needs list. This visit occurs only 8 months after the start of the new chair's term, and the team congratulates him on the progress achieved to date and on the promise of his administration and Penn's exciting opportunities.

2. Progress Since the Previous Site Visit

Condition 5, Human Resources

Previous Team Report: *The team is seriously concerned that the program's interim chair is not tenured. There is also concern that he is overly involved in too many aspects of the school's other programs and therefore spread too thin. Other aspects of this criterion are met.*

> The recently installed chair is very focused on the needs of the professional degree program. The team hopes that his work overload can be addressed.

Criterion 12.14: Ability to *design both site and building to accommodate individuals with varying physical abilities.*

Previous Team Report: *This criterion is not visibly addressed as part of the program's core curriculum.*

The team did not see evidence of serious and substantial commitment to accessibility in the design studios, notwithstanding the intensification of the Americans with Disabilities Act (ADA) and code-related issues in the new 700-level professional-practice syllabus.

Criterion 12.19: Understanding of *the basic principles that inform the design and selection of life-safety systems in buildings and their subsystems.*

→ Previous Team Report: *Life-safety systems and subsystems are not visibly addressed as part of the core curriculum.*

This had been met.

Criterion 12.21: Understanding of *the basic principles that inform the design of building service systems, including plumbing, electrical, vertical transportation, communication, security, and fire protection systems*

Previous Team Report: *Room environmental criteria and heating, cooling, and lighting systems are addressed in the core technology sequence (AR 531 and 532), but design of building service "infrastructure" systems is not visibly addressed within the core curriculum.*

→ Evidence of improvement in this area does not assuage the team's concern over the absence of key building service systems in core studio design projects.

Criterion 12.23: Understanding of *architects' legal responsibilities with respect to public health, safety, and welfare; property rights; zoning and subdivision ordinances; building codes; accessibility and other factors affecting building design, construction, and architecture practice.*

Previous Team Report: *A new professional practice course that will include an "understanding of architects' legal responsibilities" is to be introduced this semester.*

This has been met.

Criterion 12.24: Understanding of *the codes, regulations, and standards applicable to a given site and building design, including occupancy classifications, allowable building heights and areas, allowable construction types, separation requirements, occupancy requirements means of egress, fire protection, and structure.*

Previous Team Report: *The program structure does not include specific instruction in issues related to the understanding of codes, regulations, and applicable standards. Code compliance issues are scheduled to be addressed in the professional practice course to be introduced this semester. The school's innovative and demonstrated commitment to the "unity of theory and practice" should be expected to integrate the introduction of building code compliance within course work and studio.*

→ This continues to be a problem. See the discussion under Criterion 12.24.

Criterion 12.26: Awareness of *the fundamentals of development financing, building economics, and construction cost control within the framework of a design project.*

Previous Team Report: *The program does not include fundamentals of development financing, building economics, or construction cost control. Extraordinary potential exists for the*

development of these subjects with the Wharton School of Business of the University of Pennsylvania.

This criterion as rewritten in the *2002 Addendum to the 1998 Conditions and Procedures* has been met.

Criterion 12.31: Awareness of *the evolving legal context within which architects practice and of the laws pertaining to professional registration, professional service contracts, and the formation of design firms and related legal entities.*

Previous Team Report: *A new professional practice course that will include an "awareness of the laws pertaining to professional practice; registration; and professional service contracts" is to be introduced this semester. The types and formation of design firms are currently covered in the fall professional practice course.*

The new advanced professional practice course satisfies this criterion.

Criterion 12.33: Awareness of *the different methods of project delivery, the corresponding forms of service contracts, and the types of documentation required to render competent and responsible professional service.*

Previous Team Report: *The methods of project delivery and corresponding service contracts are scheduled to be covered in the spring professional practice course.*

Revised professional practice instruction has met this criterion.

3. Conditions Well Met

8 Information Resources
12.2 Graphic Skills
12.4 Critical Thinking Skills
12.6 Collaborative Skills
12.9 Use of Precedents
12.16 Formal Ordering Systems
12.18 Environmental Systems
12.20 Building Envelope Systems
12.25 Building Materials Assembly
12.27 Detailed Design Development

4. Conditions Not Met

12.14 Accessibility
12.24 Building Code Compliance
12.28 Technical Documentation
12.30 Program Preparation

5. Causes of Concern

The team found no causes of concern.

III. Compliance with the Conditions for Accreditation

1. Program Response to the NAAB Perspectives

Programs must respond to the relevant interests of the five constituencies that make up the NAAB: education (ACSA), members of the practicing profession (AIA), students (AIAS), registration board members (NCARB), and public members.

1.1 Architecture Education and the Academic Context

The program must demonstrate that it both benefits from and contributes to its institutional context.

Met	Not Met
[X]	[ ]

The Department of Architecture is the largest program in the School of Design, including the Department of City and Regional Planning, Landscape Architecture, Historic Preservation, and Fine Arts; the undergraduate programs; and the two graduate groups that oversee doctoral programs in Architecture and City and Regional Planning. Within this rich multidisciplinary environment, the school enjoys and exploits continuous opportunities for exchange and collaboration. Recent experimentation with dual degrees has blossomed into fully fledged 4-year professional programs that allow students to pursue architecture in combination with Landscape Architecture and City Planning and Historic Preservation, with more than 20 students currently enrolled.

The Department of Architecture orients its expectations for student and faculty performance to the highest academic standards for research, scholarship, and critical practice, guided by regular external evaluation and review. Faculty members continue to serve on important university committees, including the Faculty Senate Committee on Administration, the Council of Deans, and the campus Design Review committee. The intellectual assets of the department continue to strengthen university life through leadership in the areas of campus design and community planning. Examples of these are in the design of tensile event structures for the university and in the university architect's application of the department's advanced research on computational fluid dynamics.

1.2 Architecture Education and Students

The program must demonstrate that it provides support and encouragement for students to assume leadership roles during their school years and later in the profession, and that it provides an interpersonal milieu that embraces cultural differences.

Met	Not Met
[X]	[ ]

The Visiting Team remarked at the engagement and awareness of the student body. The students appear to be competent, talented, diverse, and capable not only in their studio projects, but also in their verbal communication skills. The team saw improvements in facilities and access, to such areas as the library, computer labs, wood shop, and the digital infrastructure of the studios. Related to the previous NAAB Visiting Team Report (VTR), the team noticed ongoing problems in students' access to adequate curriculum advising as well as professional mentoring. There is a need for clarification of the thesis

procedures and content, as well as increased communication between students and administration on this topic and other specific student issues.

1.3 Architecture Education and Registration

The program must demonstrate that it provides students with a sound preparation for the transition to internship and licensure.

Met	Not Met
[X]	[ ]

The program addresses the education of students in pursuit of licensure through knowledge gained in specific course settings, including design studio, construction, environmental, structures, and professional practice. The program could benefit from an organized advisory program for internship and pursuit of licensure.

1.4 Architecture Education and the Profession

The program must demonstrate how it prepares students to practice and assume new roles within a context of increasing cultural diversity, changing client and regulatory demands, and an expanding knowledge base.

Met	Not Met
[X]	[ ]

The program has the opportunity to be the bellwether for the profession when the connection is made between the innovative design thinking in the school and the professional community.

1.5 Architecture Education and Society

The program must demonstrate that it not only equips students with an informed understanding of social and environmental problems but that it also develops their capacity to help address these problems with sound architecture and urban design decisions.

Met	Not Met
[X]	[ ]

2. Program Self-Assessment

The program must provide an assessment of the degree to which it is fulfilling its mission and achieving its strategic plan.

Met	Not Met
[X]	[ ]

Commitment from a new chair and clarity presented by a new strategic plan reminds the department of its potential to affect design education. The team sees the opportunity presented by these alignments as noteworthy.

3. Public Information

The program must provide clear, complete and accurate information to the public by including in its catalog and promotional literature the exact language found in appendix A-2, which explains the parameters of an accredited professional degree program.

Met	Not Met
[X]	[ ]

The team saw evidence that the information available on the Department of Architecture's Web site is not in exact compliance with the NAAB *2002 Addendum to the 1998 Conditions and Procedures.*

4. Social Equity

The program must provide all faculty, students, and staff—irrespective of race, ethnicity, creed, national origin, gender, age, physical ability, or sexual orientation—with equitable access to a caring and supportive educational environment in which to learn, teach, and work.

Met	Not Met
[X]	[ ]

The team recommends more care be given to the preparedness and on-campus support for students from abroad, for whom English is a second language.

5. Human Resources

The program must demonstrate that it provides adequate human resources for a professional degree program in architecture, including a sufficient faculty complement, an administrative head with enough time for effective administration, administrative and technical support staff, and faculty support staff.

Met	Not Met
[X]	[ ]

Team members expressed concern regarding lack of coordination between the Architecture office and the office of the dean; the absence of additional administrative support or relief may compromise the intellectual leadership of the new department chair.

6. Human Resource Development

Programs must have a clear policy outlining both individual and collective opportunities for faculty and student growth within and outside the program.

Met	Not Met
[X]	[ ]

Many opportunities exist for both faculty and student growth; however, policies could be clearer. Recent improvements to academic advising have been made, but more improvement is needed to the student advising and mentoring process.

7. Physical Resources

The program must provide physical resources that are appropriate for a professional degree program in architecture, including design studio space for the exclusive use of each full-time student; lecture and seminar spaces that accommodate both didactic and interactive learning; office space for the exclusive use of each full-time faculty member; and related instructional support space.

Met	Not Met
[X]	[ ]

The team believes the space available could be used more intelligently and efficiently. A space-priority strategy is called for to support needed systematic upgrades.

8. Information Resources

The architecture librarian and, if appropriate, the staff member in charge of visual resource or other non-book collections must prepare a self-assessment demonstrating the adequacy of the architecture library.

Met	Not Met
[X]	[ ]

This condition is well met. However, additional attention should be paid to the climate controls in the Rare Books Room.

9. Financial Resources

Programs must have access to institutional support and financial resources comparable to those made available to the other relevant professional programs within the institution.

Met	Not Met
[X]	[ ]

There is benefit in strengthening regular communication between the Architecture department and the dean's office. This is aimed at clarifying specific fundraising expectations and responsibilities and should focus on financial goals and their timeline for accomplishment.

10. Administrative Structure

The program must be a part of, or be, an institution accredited by a recognized accrediting agency for higher education. The program must have a degree of autonomy that is both comparable to that afforded to the other relevant professional programs in the institution and sufficient to assure conformance with all the conditions for accreditation.

Met	Not Met
[X]	[ ]

11. Professional Degrees and Curriculum

The NAAB only accredits professional programs offering the Bachelor of Architecture and the Master of Architecture degrees. The curricular requirements for awarding these degrees must include three components—general studies, professional studies, and

electives—which respond to the needs of the institution, the architecture profession, and the students respectively.

Met [X] Not Met [ ]

12. Student Performance Criteria

The program must ensure that all its graduates possess the skills and knowledge defined by the performance criteria set out below, which constitute the minimum requirements for meeting the demands of an internship leading to registration for practice.

12.1 Verbal and Writing Skills

Ability to *speak and write effectively on subject matter contained in the professional curriculum*

Met [X] Not Met [ ]

12.2 Graphic Skills

Ability to *employ appropriate representational media, including computer technology, to convey essential formal elements at each stage of the programming and design process*

Met [X] Not Met [ ]

The program should be recognized for the careful integration of drawing and computational skills into core design studios through targeted visual studies coursework.

12.3 Research Skills

Ability to *employ basic methods of data collection and analysis to inform all aspects of the programming and design process*

Met [X] Not Met [ ]

12.4 Critical Thinking Skills

Ability to *make a comprehensive analysis and evaluation of a building, building complex, or urban space*

Met [X] Not Met [ ]

12.5 Fundamental Design Skills

Ability to *apply basic organizational, spatial, structural, and constructional principles to the conception and development of interior and exterior spaces, building elements, and components*

Met	Not Met
[X]	[ ]

12.6 Collaborative Skills

Ability to *identify and assume divergent roles that maximize individual talents, and to cooperate with other students when working as members of a design team and in other settings*

Met	Not Met
[X]	[ ]

12.7 Human Behavior

Awareness of *the theories and methods of inquiry that seek to clarify the relationships between human behavior and the physical environment*

Met	Not Met
[X]	[ ]

12.8 Human Diversity

Awareness of *the diversity of needs, values, behavioral norms, and social and spatial patterns that characterize different cultures, and the implications of this diversity for the societal roles and responsibilities of architects*

Met	Not Met
[X]	[ ]

12.9 Use of Precedents

Ability to *provide a coherent rationale for the programmatic and formal precedents employed in the conceptualization and development of architecture and urban design projects*

Met	Not Met
[X]	[ ]

12.10 Western Traditions

Understanding of *the Western architectural canons and traditions in architecture, landscape, and urban design, as well as the climatic, technological, socioeconomic, and other cultural factors that have shaped and sustained them*

Met	Not Met
[X]	[ ]

12.11 Non-Western Traditions

Awareness of *the parallel and divergent canons and traditions of architecture and urban design in the non-Western world*

Met	Not Met
[X]	[ ]

12.12 National and Regional Traditions

Understanding of *the national traditions and the local regional heritage in architecture, landscape, and urban design, including vernacular traditions*

Met	Not Met
[X]	[ ]

12.13 Environmental Conservation

Understanding of *the basic principles of ecology and architects' responsibilities with respect to environmental and resource conservation in architecture and urban design*

Met	Not Met
[X]	[ ]

12.14 Accessibility

Ability to *design both site and building to accommodate individuals with varying physical abilities*

Met	Not Met
[ ]	[X]

Accessibility is minimally evident in the work product of the core curriculum including site and building execution.

12.15 Site Conditions

Ability to *respond to natural and built site characteristics in the development of a program and design of a project*

Met	Not Met
[X]	[ ]

12.16 Formal Ordering Systems

Understanding of *the fundamentals of visual perception and the principles and systems of order that inform two- and three-dimensional design, architectural composition, and urban design*

Met	Not Met
[X]	[ ]

This criterion is well met.

12.17 Structural Systems

Understanding of *the principles of structural behavior in withstanding gravity and lateral forces, and the evolution, range, and appropriate applications of contemporary structural systems*

Met	Not Met
[X]	[ ]

12.18 Environmental Systems

Understanding of *the basic principles that inform the design of environmental systems, including acoustics, lighting and climate modification systems, and energy use*

Met	Not Met
[X]	[ ]

This criterion is well met. In addition to the core courses, the team acknowledges the 700-level environmental systems electives, which provide opportunities for students to investigate in more detail technologies that can inform and shape the future of the profession.

12.19 Life-Safety Systems

Understanding of *the basic principles that inform the design and selection of life-safety systems in buildings and their subsystems*

Met	Not Met
[X]	[ ]

12.20 Building Envelope Systems

Understanding of *the basic principles that inform the design of building envelope systems*

Met	Not Met
[X]	[ ]

This criterion is well met.

12.21 Building Service Systems

Understanding of *the basic principles that inform the design of building service systems, including plumbing, electrical, vertical transportation, communication, security, and fire protection systems*

Met	Not Met
[X]	[ ]

12.22 Building Systems Integration

Ability to *assess, select, and integrate structural systems, environmental systems, life-safety systems, building envelope systems, and building service systems into building design*

Met	Not Met
[X]	[ ]

While extensive study in singular building systems is evidenced, the ability to integrate structural, environmental systems, life safety-systems, building envelope systems, and building service systems is not consistently delivered throughout the core curriculum.

12.23 Legal Responsibilities

Understanding of *architects' legal responsibilities with respect to public health, safety, and welfare; property rights, zoning and subdivision ordinances; building codes; accessibility and other factors affecting building design, construction, and architecture practice*

Met	Not Met
[X]	[ ]

12.24 Building Code Compliance

Understanding of *the codes, regulations, and standards applicable to a given site and building design, including occupancy classifications, allowable building heights and areas, allowable construction types, separation requirements, means of egress, fire protection, and structure*

Met	Not Met
[ ]	[X]

While there is evidence of introductions to zoning and building codes in core coursework, the integration of life-safety concerns as an important regulatory component in studio projects is minimally evident.

12.25 Building Materials and Assemblies

Understanding of *the principles, conventions, standards, applications, and restrictions pertaining to the manufacture and use of construction materials, components, and assemblies*

Met	Not Met
[X]	[ ]

This criterion is well met.

12.26 Building Economics and Cost Control

Understanding of *building economics and construction cost control within the framework of a design project.*

Met	Not Met
[X]	[ ]

12.27 Detailed Design Development

Ability to *assess, select, configure, and detail as an integral part of the design appropriate combinations of building materials, components, and assemblies to satisfy the requirements of building programs.*

Met	Not Met
[X]	[ ]

This criterion is well met.

12.28 Technical Documentation

Ability to *make technically precise descriptions and documentation of a proposed design for purposes of review and construction*

Met	Not Met
[ ]	[X]

The Visiting Team did not find evidence of the precise technical description or documentation necessary for purposes of review or construction.

12.29 Comprehensive Design

Ability to *produce an architecture project informed by a comprehensive program, from schematic design through the detailed development of programmatic spaces, structural and environmental systems, life-safety provisions, wall sections, and building assemblies, as may be appropriate; and to assess the completed project with respect to the program's design criteria*

Met	Not Met
[X]	[ ]

There is inconsistent evidence of comprehensive design that includes integration of necessary supporting systems and their three-dimensional applications. However, there is evidence of highly conceptual research-based design.

12.30 Program Preparation

Ability to *assemble a comprehensive program for an architecture project, including an assessment of client and user needs, a critical review of appropriate precedents, an inventory of space and equipment requirements, an analysis of site conditions, a review of the relevant laws and standards and an assessment of their implications for the project, and a definition of site selection and design assessment criteria*

Met	Not Met
[ ]	[X]

The team saw no direct evidence of comprehensive program writing and analysis.

12.31 The Legal Context of Architectural Practice

Understanding of *the evolving legal context within which architects practice, and of the laws pertaining to professional registration, professional service contracts, and the formation of design firms and related legal entities*

Met	Not Met
[X]	[ ]

12.32 Practice Organization and Management

Awareness of *the basic principles of office organization, business planning, marketing, negotiation, financial management, and leadership, as they apply to the practice of architecture*

Met	Not Met
[X]	[ ]

12.33 Contracts and Documentation

Awareness of *the different methods of project delivery, the corresponding forms of service contracts, and the types of documentation required to render competent and responsible professional service*

Met	Not Met
[X]	[ ]

The team wants more evidence of a relationship between contracts and appropriate specification and documentation.

12.34 Professional Internship

Understanding of *the role of internship in professional development, and the reciprocal rights and responsibilities of interns and employers*

Met	Not Met
[X]	[ ]

The delivery of this evidence needs more formal organization.

12.35 Architects' Leadership Roles

Awareness of *architects' leadership roles in project execution from inception, design, and design development to contract administration, including the selection and coordination of allied disciplines, post-occupancy evaluation, and facility management*

Met	Not Met
[X]	[ ]

12.36 The Context of Architecture

Understanding of *the shifts which occur—and have occurred—in the social, political, technological, ecological, and economic factors that shape the practice of architecture*

Met	Not Met
[X]	[ ]

12.37 Ethics and Professional Judgment

Understanding of *the ethical issues involved in the formation of professional judgments in architecture design and practice*

Met	Not Met
[X]	[ ]

III. Appendices

Appendix A: Program Information

1. History and Description of the Institution

The following text is taken from the 2003 University of Pennsylvania Architecture Program Report.

Benjamin Franklin founded the University of Pennsylvania in 1740. Originally called the College of Philadelphia, it was established as the nation's first University in 1791. Teaching at Penn (then as now) was guided by Franklin's call for practical education, "regarding being had to the several professions for which they (the students) are intended." Throughout its history, the University emphasized practical knowledge as an important aspect of human understanding. This objective also served as the basis for the establishment of its program in architecture.

The original College of Philadelphia was located in the greatest metropolis of the British colonies; it was an urban university, unlike its early contemporaries Harvard and Princeton Colleges, both established in village settings. By the end of the century, however, its first downtown site was no longer capable of accommodating its growing activities and size. For greater space, the College trustees purchased the house erected for the President of the United States, and had its architect, Benjamin Latrobe, add to it a medical amphitheater. In this building two of the nation's most important architects, Robert Mills and William Strickland, learned their professional skills. Later, Strickland enlarged this building, and in the coming years he built additional buildings for the College in the immediate vicinity, as did Mills. In 1872, the University of Pennsylvania moved to a new location, where it could expand without impediment. It relocated to a site that would grow to include 247 acres in West Philadelphia, just across the Schuylkill River, west of the city center.

The academic structure of the University comprises four undergraduate schools and twelve graduate and professional schools. It is one of the country's largest private universities, with over 1,700 faculty members and 22,000 students equally divided between undergraduates and graduates.

2. Institutional Mission

The following text is taken from the 2003 University of Pennsylvania Architecture Program Report.

The following Strategic Plan is the result of an extensive effort that began more than 2 years ago at a retreat of the University Trustees, followed by a series of discussions with the Council of Deans, the Academic Planning and Budget Committee, the President's Advisory Group, and the executive vice president's senior management team concerning the goals and priorities that should be included in the new plan. These discussions resulted in a tentative outline that provided the framework for the next step: the establishment of 14 committees, consisting of over 200 faculty, staff, undergraduate, and graduate students from across the University, who spent the Fall semester developing the major areas of the plan. The following February, an open forum was held to solicit additional suggestions and encourage more input from the University community; on April 2, 2002 a draft plan was published for comment in *Almanac* and many of the suggestions received were subsequently incorporated in the plan that appears here.

As you will note, this new plan builds on the Agenda for Excellence, but updates it to reflect Penn's current context. As with the Agenda, it provides a blueprint for school and resource center plans, a basis for estimating and relating projected costs to the University's financial capabilities and constraints, and a roadmap for the University's future fundraising efforts. We look forward to working with the deans and directors of each school and resource center and all members of the University community in realizing the aspirations and goals articulated below.

President Judith Rodin and Provost Robert Barchi

3. Program History

The following text is taken from the 2003 University of Pennsylvania Architecture Program Report.

While architects were associated with the University since its founding, the idea of establishing a department of architecture and associated arts was not raised until the 1850s. The trustees considered forming a Department of Mines, Arts, and Manufactures in 1852, and its curriculum was to include courses in "sketching and plan drawing." This plan was abandoned amidst a national recession and the Civil War. In 1868 the University established the Department of Arts, which was later renamed the Department of Science. Architecture courses were taught in the Department in 1869, making architecture at Penn the second oldest program in the United States. Thomas Webb Richards both headed the initial program and designed the first building constructed on Penn's West Philadelphia campus, College Hall, a commission he won in an open competition in 1870. The direction of the program was assumed next by Theophilus Chandler, who also became president of the AIA, one of many Penn graduates to assume this position. Chandler became the first dean of the School and proceeded to organize a larger faculty, bringing figures such as Frank Furness, Wilson Eyre, Walter Cope, and John Stewardson onto the faculty.

In 1890, the School of Architecture achieved independent status within the Towne Scientific School of the University, and at that time it also introduced a full 4-year undergraduate architectural program. Many of Penn's early professors of architecture were trained at the Ecole des Beaux-Arts. In Philadelphia they established ateliers, which became the educational and professional framework for architectural education at Penn. The T-Square Club was founded in 1883, as a breakaway organization from the Philadelphia AIA In the formative years of the architecture program at Penn, close connections were established among the University, the AIA, and these clubs and ateliers. Warren Powers Laird, one of these Beaux-Arts trained–architects, became Professor of Architecture and shaped the curriculum in the manner of the Beaux-Arts method: with emphasis on design, through competitions, and stress on office training. While Laird emphasized professional issues, his contemporary and colleague, Paul Phillipe Cret, as Professor of Design, emphasized the art of architecture. During these years, the program sought to balance the concerns of artistic expression with the increasing demands of professional competency.

The arrival of G. Holmes Perkins in 1951 was a turning point in the School's history. Five departments were consolidated into the Graduate School of Fine Arts: architecture, city and regional planning, landscape architecture, fine arts, and urban design. As both Dean and Chairman of Architecture, Perkins brought a number of distinguished faculty to Penn: Lewis Mumford, Robert Le Ricolais, David Crane, Ian McHarg, Erwin Gutkind, Robert Geddes, and Louis Kahn. To this group were added a number of younger architects and

urban designers: Romaldo Giurgola, Robert Venturi, and Denise Scoff Brown. It was this group that came to be called the "Philadelphia School."

During recent decades, under the Chairmanship of Richard Wesley and, previously, David Leatherbarrow, the Department has expanded its facilities, increased the number of faculty and students and modified its curricula and courses in response to contemporary developments in architectural practice, theory, and pedagogy. It remains closely connected to the City of Philadelphia, the University, and the School of Design, while developing international linkages and participating in the development of the discipline at an international level.

In addition to the 3-year professional Master of Architecture program (206 students in 2002–03), the Department offers a nonprofessional 4-year undergraduate major in Architecture (through the College), a 1-year Master of Science for advanced studies in architectural history and theory, and a Ph.D. program. Courses offered by the Ph.D. program are open to M. Arch. students. Design-based postprofessional studies are facilitated through a Postprofessional Option within the Master of Architecture program. The Program in Historic Preservation is also housed within the Department and offers electives courses that are open to M. Arch. students.

The faculty complement for the Department includes four Professors, six Associate Professors (one specifically in Historic Preservation), two Assistant Professors, four part-time Professors in Practice, five part-time Adjunct Professors, three Adjunct Associate Professors (one full time and two part time), as well as a large number of part-time Lecturers. Within what the School calls "Standing and Associated Faculty" there are 13 faculty members and 11 part-time faculty members: David Leatherbarrow, Peter McCleary, Detlef Mertins, Witold Rybczynski, William Braham, Annette Fierro, Branko Kolarvic, Ali Malkawi, Frank Matero, Marion Weiss, Ali Rahim, Cathrine Veikos, Homo Farjadi, Enrique Norten, Winka Dubbeldam, Wesley Wei, Samuel Harris, Stephen Kierans, John Milner, Roger Moss, James Timberlake, Tony Atkin, Richard Farley, and Richard Wesley.

4. Program Mission

The following text is taken from the 2003 University of Pennsylvania Architecture Program Report.

The Master of Architecture Professional Degree Program educates architects through the development of disciplinary skills, knowledge, and methods of inquiry for the professional practice of architecture. Architecture is understood as a modality of creative expression within a culture—a material art realized within the technological, economic, social, and political conditions of contemporary society.

The Professional Degree Program aims at a disciplinary education in architecture that extends the traditional teaching in design, representation, technology, and theory to incorporate contemporary media, modes of production, economics, cultural theory, and professional practice. While disciplinary in orientation, the program encourages engagement with the related disciplines of fine arts, historic preservation, landscape architecture, urban design, and city and regional planning, all of which are housed within the School of Design. Finally, the program extends architecture beyond these related disciplines into the realms of culture, civilization, and society, through study but also through engagement with the University, the city of Philadelphia, and the country. The program encourages an interdisciplinary understanding of the social and natural environment. It nurtures professional ethics and social responsibility in tandem with

creative talent, seeking to graduate architects who will contribute actively to the betterment of society in a changing world.

Education in the Professional Degree Program is centered in the design studios, providing students with opportunities to learn from projects that vary in complexity, content, and context and that place emphasis in turn on different aspects of architecture. Required courses introduce fundamental knowledge and skills in all areas of an architectural curriculum. At more advanced levels, students pursue in-depth studies in these areas through elective courses. Instruction in representational skills is woven into the first 3 semesters of the program using an intense workshop format. At the advanced level, students may conclude their studies by taking research studios, advanced design studios, or undertaking an independent thesis. Students are also able to undertake a joint degree in Landscape Architecture. The program is, in effect, an infrastructure that enables students to pursue their own interests and directions having first gained fundamental knowledge and skills within the core curriculum.

From its beginning, Architecture at Penn has emphasized the link among theoretical speculation, professional practice, and artistic expression. Its faculty has always been distinguished by bringing these three trajectories together, and in so doing engendering new ways of thinking and spaces of imagination. Since the time of Louis Kahn and Robert Le Ricolais, architecture's relationship to modernity and more specifically to technology has been a consistent focus, understood in the broadest sense as technologies of representation and organization as much as fabrication. In recent years, architecture at Penn has emerged as a vital force through its engagement with new technologies—digital, environmental, structural, and organic. This engagement has been as much critical as speculative, confronting the broader issues of modernization in our time.

Architecture finds itself today in a world that resists easy analysis and assessment. It has been called an age of globalization, information, and biotechnology. It has been characterized as postindustrial, postmetropolitan, and posthuman. Crises in ecology and social insecurity have come hand in hand with the emergence of control society and network economy. It is no accident that ours is an age that produces theories of complexity, for they are urgently needed. Transformations in the economic, technological, social matrix over the past 30 years have affected every aspect of architecture, its place in the world, potential contribution to society, and status as a discipline and art.

Focused on the design and fabrication of buildings, architecture embraces every scale of cultural production and mode of material organization—from the spoon to the city, from objects to environments, from the tangible to the ephemeral. Architectural education provides a platform for participating in the world around us as an ongoing and evolving process of creation—a complex web of performances that are at once social and natural, stabilizing and changing, constraining and enabling. Architecture at Penn seeks to pilot those processes so that architects may better serve society, enhance life, and enrich experience. Through research, critical inquiry, and experimentation, we conceptualize potentials within the multiple systems of production that transform and maintain the environment in which people live.

As the modulation of life practices, interactions, rhythms, and experiences becomes the focus not only of cultural interpretation but economic investment and political contestation, architecture's expertise is being reconfigured within an interwoven field of material practices—including landscape, urban design, engineering, industrial design, graphic design, furniture, fashion, art, media, and entertainment. Together, these design arts operate within the dynamic ecologies and political economies whose manifestations at the largest scale constitute the phenomenon of urbanism. The more diverse architectural practices become, the more evident it is that the conceptual, projective, and synthetic

modes of thinking developed through architectural education—together with skills that are at once spatial, formal, visual, and material—are adaptable to a wide range of situations. Increasingly, architectural graduates pursue diverse and hybrid careers, not only in architecture but also within this expanded field of creative activity.

Architecture at Penn is poised to provide leadership within a changing and often uncertain world. It is the responsibility of the Department to provide the infrastructure and milieu for faculty and students to excel in engaging the challenges and opportunities of our time. The new Chair, Detlef Mertins, has begun the process of developing a new Strategic Plan for the Program, to articulate a specific agenda for the development of the program, curriculum, and facilities, as well as support for student aid, research, travel, events, and publications.

5. **Program Strategic Plan**

The following text is taken from the 2003 University of Pennsylvania Architecture Program Report.

Following the accreditation process in 1999, the Head of the Architecture Department, Richard Wesley, prepared a *Response to the NAAB Visiting Team Report* as "a means of establishing a '5-year plan' for the Master of Architecture (M. Arch.) Professional Degree Program." That document is reproduced in full in Appendix 9 of the APR. Some aspects of that Plan—notably the targets for new Standing Faculty—have been achieved, while others are still in the process of being achieved.

The incoming Chair of the Architecture Department, Detlef Mertins, is in the process of initiating a consultative process with faculty, students, and alumni/ae that will lead to the formulation of a new Strategic Plan for the Professional Degree Program and the Department as a whole. The new Strategic Plan will be integrated into the School's strategic plan and will be available to the Visiting Team.

Appendix B: The Visiting Team

Representing the ACSA
Donna V. Robertson, AIA
Illinois Institute of Technology
College of Architecture
S.R. Crown Hall
3360 South State Street
Chicago, IL 60616-3850
(312) 567-3230
(312) 567-5820 fax
robertson@iit.edu

Representing the AIA
A. Spencer A. Leineweber, FAIA
Spencer Architects, Inc.
1820 University Avenue #10
Honolulu, Hawaii 96822-2401
(808) 955-9595
(808) 944-9115 fax
aspencer@hawaii.edu

Representing the AIAS
Jeanine Gunderson, Assoc. AIA
74 Spruce Street
Mahtomedi, MN 55115-1947
(651) 226-5332
jeaninegunderson@yahoo.com

Representing the NCARB
Gordon R. Carrier, AIA, NCARB
Carrier Johnson
1301 Third Avenue
San Diego, CA 92102-4005
(619) 239-2353
(619) 239-6227 fax
DLL@carrierjohnson.com

Observer
Daniel S. Friedman, Ph.D., FAIA
School of Architecture
University of Illinois at Chicago
845 West Harrison Street 3100
Chicago, IL 60607-7024
(312) 996-4056
(312) 413-4488 fax
dsf@uic.edu

Appendix C: The Visit Agenda

Saturday, March 27

3:00 p.m.	Team arrival and hotel check-in
5:55 p.m.	Team meeting with Chair Detlef Mertins of the Department of Architecture in the lobby of the Inn at Penn
6:00 p.m.–7:15 p.m.	Overview of the Team Room in Meyerson Hall
7:30 p.m.	Team dinner with introductions and orientation at the Penne Restaurant at the Inn at Penn

Sunday, March 28

8:00 a.m.–8:40 a.m.	Team breakfast with Chair Mertins
9:00 a.m.–9:30 a.m.	APR review and assembly of issues and questions
9:30 a.m.–10:30 a.m.	Introductions, orientation, and overview of the Team Room with Chair Mertins, Annette Fierro, William Braham, and selected faculty members
10:30 a.m.–12:00 p.m.	Initial team review of exhibits and records
12:00 p.m.	Team lunch with Program Administrators: Chair Mertins, Annette Fierro, William Braham, Mary O'Toole, and Lindsay Falck in the Department of Architecture Conference Room
1:00 p.m.–2:30 p.m.	Tour of the facilities with Chair Mertins, William Braham, Annette Fierro, and Lindsay Falck
2:30 p.m.–3:30 p.m.	Entrance meeting with all M. Arch. faculty members in Room B3, Meyerson Hall
3:30 p.m.–6:00 p.m.	Team review of exhibits and records
6:00 p.m.–7:30 p.m.	Team dinner at a nearby restaurant
7:30 p.m.–8:30 p.m.	Debriefing session

Monday, March 29

8:00 a.m.–8:40 a.m.	Team breakfast with Chair Mertins
9:00 a.m.–9:45 a.m.	Entrance meeting with University Provost Robert L. Barchi, Ph.D., in Room 122, College Hall
10:00 a.m.–10:30 a.m.	Entrance meeting with Dean Gary A. Hack of the School of Design and Chair Mertins in Room 101, Meyerson Hall
10:30 a.m.–12:00 p.m.	Continued review of exhibits and records Observation of lectures and seminars*
12:00 p.m.	Lunch with selected faculty members (representing different streams of the curriculum) in the Department of Architecture Conference Room
1:00 p.m.–2:00 p.m.	Entrance meeting with all students in the M. Arch. Professional Degree Program in Room B1, Meyerson Hall
2:00 p.m.–5:00 p.m.	Continued review of exhibits and records, observation of lectures, seminars, and studios
5:00 p.m.–6:00 p.m.	Reception with key administrators, alumni/ae, and local practitioners in Dean's Alley, Meyerson Hall
6:00 p.m.–7:00 p.m.	Team dinner
7:00 p.m.–9:00 p.m.	Continued review of exhibits and records
9:00 p.m.–10:00 p.m.	Debriefing session

Tuesday, March 30

8:00 a.m.–8:40 a.m.	Team breakfast with Chair Mertins
9:00 a.m.–10:00 a.m.	Review of electives and related programs
10:00 a.m.–12:00 p.m.	Meetings with members of the School of Design administrative staff in the Conference Room, Department of Architecture: • Librarian William Keller and Assistant Librarian Heather Glaser in the Fisher Fine Arts Library • Manager Dennis Pierattini, PennDesign Fabrication Lab

*A list of the lecturers and seminars observed appears at the end of the agenda.

	• IT Project Leader Cathy di Bonaventura, Computing Resources • Lindsay Falck for Director Joseph Moser, Operations and Planning • Manager Christopher Cataldo, Administration and Finance • Associate Dean Patricia Woldar, School of Design • Coordinator Mary O'Toole, Department of Architecture
11:00 a.m.–12:00 p.m.	• Assistant Director Maura Collins Matthews, Development and Alumni/ae Relations, PennDesign • Assistant Vice President Sam Lundquist, Development, Office of Development and Alumni/ae Relations • Executive Director Linda Schleifer, School and Center Programs, Office of Development and Alumni/ae Relations.
12:00 p.m.–1:00 p.m.	Lunch with architecture student representatives in Room B3, Meyerson Hall
1:00 p.m.–2:00 p.m.	Meeting with entire M. Arch. faculty in Room 306, Fisher Fine Arts
1:00 p.m.–5:00 p.m.	Complete review of exhibits and records
6:00 p.m.–7:00 p.m.	Team dinner
7:30 p.m.–10:00 p.m.	Accreditation deliberations and drafting of the VTR
Wednesday, March 31	
8:30 a.m.–9:00 a.m.	Team breakfast with Chair Mertins
9:30 a.m.–10:30 a.m.	Exit meeting with Dean Gary A. Hack, School of Design, and Chair Mertins in Room 101, Meyerson Hall
11:00 a.m.–11:45 a.m.	Exit meeting with Provost Barchi in Room 122, College Hall
12:00 p.m.–12:45 p.m.	Program-wide exit meeting with all students, faculty, and staff in Room B1, Meyerson Hall
12:45 p.m.–2:00 p.m.	Team lunch with members of the Department of Architecture

Studios and Courses in session on Monday:

ARCH 502	Foundation Level Design Studio II (2:00 p.m.–6:00 p.m.)
ARCH 602/702	Intermediate Level Design Studio III (12:00 p.m.–6:00 p.m.)
ARCH 704	Advanced Level Design Studio VI (12:00 p.m.–6:00 p.m.)
ARCH 706	Design Arch. Thesis (2:00 p.m.–6:00 p.m.)
ARCH 716	Elective Course: The Politics of Time taught by Ed Keller (9:00 a.m.–12:00 p.m.)

Courses in session on Tuesday:

ARCH 534	Environmental Systems II taught by William Braham (10:00 a.m.–12:00 p.m.)
ARCH 536	Structures II taught by Richard Farley (2:00 p.m.–3:30 p.m.)
ARCH 632	Tech Elective: Concepts of Structures taught by Peter McCleary (10:00 a.m.–1:00 p.m.)
ARCH 638	Tech Elective: Biotechniques taught by William Braham (2:00 p.m.–5:00 p.m.)
ARCH 638	Tech Elective: Building Systems taught by Richard Farley (2:00 p.m.–5:00 p.m.)
ARCH 722	Elective: Furniture Design taught by Andrew Jones (10:00 a.m.–1:00 p.m., 2:00 p.m.–5:00 p.m.)
ARCH 742	Elective: Digital Morphogenesis taught by Branko Kolarevic (9:00 a.m.–12:00 p.m.)
ARCH 762	Design and Development: taught by Witold Rybczynski (10:30 a.m.–12:00 p.m.)
ARCH 812	Elective: Advanced Theory II taught by Detlef Mertins (10:00 a.m.–1:00 p.m.)

IV. Report Signatures

Respectfully submitted,

Donna V. Robertson, AIA
Team Chair
Representing the ACSA

A. Spencer A. Leineweber, FAIA
Team member
Representing the AIA

Jeanine Gunderson, Assoc. AIA
Team member
Representing the AIAS

Gordon R. Carrier, AIA, NCARB
Team member
Representing the NCARB

Daniel S. Friedman, Ph.D., FAIA
Observer

4.6 Annual Reports & NAAB Response

2004 NAAB STATISTICS REPORT

SCHOOL: UNIVERSITY OF PENNSYLVANIA

ACSA REGION: EC **NE** SE SW WC W (circle one)

PUBLIC or PRIVATE: (circle one)

STUDENT DATA — For Accredited Programs Only

	4 Year **PreProf	B.Arch	B.Arch **PostPreProf	B.Arch ***PostNonProf	(1 yr.PostProf) M.Arch **PostPreProf	(3+ yr.Prof) M.Arch ***PostNonProf
Full-Time Students						192
Part-Time Students						1
FTE Students						192
Arch Design Studio Students						192
Students Working Part-Time						n/a
Outside Stud. Serv. by Dept.						18
African-American Students						2
Native American Students*						0
Asian/Pacific Isle Students						17
Hispanic Origin Students						6
Women Students						95
Foreign Students						57
Total Degrees Awarded						65
Grads. Fin. Estab. No. Yrs.						n/a
Degrees Awarded Women						30
Degrees Awarded Afri-Amer						0
Degrees Awarded Amer. Ind.						0
Degrees Awarded Asi/Pac. Isl						6
Degrees Awarded Hispanics						2
Min Req. SAT/ACT/GRE Score						n/a
Number of Applicants						499
Number Accepted						222
Enrollment Target/Goal						65
Student Studio/Faculty Ratio						14:01

*Includes Eskimos and Aleuts
**Includes four-year program component of 4+1 yrs. B.Arch degree and 4+2 yrs. M.Arch degree.
***Non-Professional: baccalaureate degree that is not part of an accredited professional program.

FACILITY/RESOURCE DATA

Departmental Library LCNA or 720-729 Collection	n/a	
Total Architecture Collection in Departmental Library	n/a	
University Library LCNA or 720-729 Collection	46,500	
Total Architecture Collection in University Library	127,718	
Departmental Library Architecture Slides	n/a	
University Library Architecture Slides	475,000	
Departmental Library Architecture Videos	300	(contained in University Library)
Staff in Dept. Library	n/a	
Number of Computer Stations	40*	
Amount Spent on Information Technology	$10,400**	
Annual Budget for Library Resources	n/a	
Per-Capita Financial Support Received from University	n/a	(not public information)
Private Outside Monies Received by Source	n/a	(not public information)
Studio Area (Net Sq. ft.)	13,000	
Total Area (Gross Sq. ft.)	42,000	

(*available in labs; students required to own a computer in 2nd semester, first year)
(**for software install on computers in the shared lab and specific to the Department:
IT is centralized within the school and this figure does not respresent the full amount spent)

FULL-TIME FACULTY SALARIES

	Number	Minimum	Average	Maximum	Univ. Avg.
Professor	—	—	—	—	n/a
Associate Professor	—	—	—	—	n/a
Assistant Professor	—	—	—	—	
Instructor	—	—	—	—	

FACULTY DATA

	Departmental Total
Full-Time Faculty	—
Part-Time Faculty	—
Full-Time Equivalent (FTE) Faculty	—
Tenured Faculty	—
Tenure-Track Positions	—
FTE Administrative Positions	—
Faculty Engaged in Service to Comm.	n/a
Faculty Engaged in Service to Univ.	n/a
U.S. Licensed Registered Architects (F-T)	~40
U.S. Licensed Registered Architects (P-T)	n/a
FTE Graduate TAs	—
FT Faculty Avg. Contact Hrs/Wk	
PT Faculty Avg. Contact Hrs/Wk	10 to 15

NO. FULL-TIME FACULTY CREDENTIALS

Ph.D.	5
D. Arch	1
M.A. or S.	4
Prof. M. Arch	7
B. Arch	4
Post Prof. Masters	1
Other	14
Other	14

	FT	PT	Tenured	Prof.	Assoc.	Assist.
African-American Faculty	—	—	—	—	0	0
American Indian Faculty*	—	0	0	0	0	0
Asian/Pacific Island Faculty	—	0	0	0	0	1
Hispanic Origin Faculty	—	0	0	0	1	0
Women Faculty	—	—	—	—	2	1

*Includes Eskimos and Aleuts

UNIVERSITY OF PENNSYLVANIA
School of Design
Department of Architecture

National Architectural Accreditation Board

Annual Report 2004/05

Prepared by Detlef Mertins, Chair
August 1, 2005

Statistical Report

See attached

Report on Progress toward Conditions not Met in Visiting Team Report, May 2004

12.14 Accessibility
Measures have been taken to incorporate this condition in 2005/06 in the second year design studio.

12.24 Building Code Compliance
Measures have been taken to incorporate this subject into the second year design studio in 2005/06, to complement instruction in courses in technology and professional practice.

12.28 Technical Documentation
Measures have been taken to incorporate this condition in the second year design studio in 2005/06.

12.30 Program Preparation
Measures are being taken to incorporate this condition into the second year design studio in 2005/06.

Summary of Other Changes

1. Instruction in digital modeling has been advanced into the first year of the program.
2. Instruction in sustainable design has been intensified in the second year design studio.

2005 NAAB STATISTICS REPORT

SCHOOL: UNIVERSITY OF PENNSYLVANIA

ACSA REGION: EC **NE** SE SW WC W (circle one)

PUBLIC or PRIVATE: (circle one)

STUDENT DATA

	For Accredited Programs Only					
	4 Year	B.Arch	B.Arch	B.Arch	(1 yr.PostProf) M.Arch	(3+ yr.Prof) M.Arch
Full-Time Students						208
Part-Time Students						18
FTE Students						215
Arch Design Studio Students						188
Students Working Part-Time						n/a
Outside Stud. Serv. by Dept.						109
African-American Students						1
Native American Students*						0
Asian/Pacific Isle Students						16
Hispanic Origin Students						9
Women Students						99
Foreign Students						52
Total Degrees Awarded						58
Grads. Fin. Estab. No. Yrs.						53
Degrees Awarded Women						31
Degrees Awarded Afri-Amer						1
Degrees Awarded Amer. Ind.						0
Degrees Awarded Asi/Pac. Isl						4
Degrees Awarded Hispanics						1
Min Req. SAT/ACT/GRE Score						n/a
Number of Applicants						574
Number Accepted						180
Enrollment Target/Goal						72
Student Studio/Faculty Ratio						14:01

*Includes Eskimos and Aleuts

FACILITY/RESOURCE DATA

Departmental Library LCNA or 720-729 Collection	n/a	
Total Architecture Collection in Departmental Library	n/a	
University Library LCNA or 720-729 Collection	46,500	
Total Architecture Collection in University Library	127,718	
Departmental Library Architecture Slides	n/a	
University Library Architecture Slides	475,000	
Departmental Library Architecture Videos	300	(contained in University Library)
Staff in Dept. Library	n/a	
Number of Computer Stations	40*	
Amount Spent on Information Technology	~$11,000**	
Annual Budget for Library Resources	n/a	
Per-Capita Financial Support Received from University	n/a	(not public information)
Private Outside Monies Received by Source	n/a	(not public information)
Studio Area (Net Sq. ft.)	13,000	
Total Area (Gross Sq. ft.)	42,000	

(*available in labs; students required to own a computer in first year)
(**for software installed on computers in the shared lab and specific to the Department)
IT is centralized within the school and this figure does not respresent the full amount spent)

FULL-TIME FACULTY SALARIES

	Number	Minimum	Average	Maximum	Univ. Avg.
Professor					n/a
Associate Professor					n/a
Assistant Professor					n/a
Instructor					

FACULTY DATA

	Departmental Total
Full-Time Faculty	
Part-Time Faculty	
Full-Time Equivalent (FTE) Faculty	
Tenured Faculty	
Tenure-Track Positions	
FTE Administrative Positions	
Faculty Engaged in Service to Comm.	n/a
Faculty Engaged in Service to Univ.	n/a
U.S. Licensed Registered Architects (F-T)	~40
U.S. Licensed Registered Architects (P-T)	n/a
FTE Graduate TAs	n/a
FT Faculty Avg. Contact Hrs/Wk	
PT Faculty Avg. Contact Hrs/Wk	10 to 15

NO. FULL - TIME FACULTY CREDENTIALS

Ph.D.	4
D. Arch	1
M.A. or S.	3
Prof. M. Arch	5
B. Arch	5
Post Prof. Masters	3
Other	14

	FT	PT	Tenured	Prof.	Assoc.	Assist.
African-American Faculty						
American Indian Faculty*			0	0	0	0
Asian/Pacific Island Faculty			0	0	0	1	0	1
Hispanic Origin Faculty			0	0	0	1		0
Women Faculty					2			2

*Includes Eskimos and Aleuts

NAAB05Stats.xls

UNIVERSITY OF PENNSYLVANIA
School of Design
Department of Architecture

National Architectural Accreditation Board

Annual Report 2006/07

Prepared by Detlef Mertins, Chair
June 21, 2007

Statistical Report

See attached

Report on Progress toward Conditions not Met in Visiting Team Report, May 2004

12.14 Accessibility
Measures have been taken to incorporate this condition in the second year design studio.

12.24 Building Code Compliance
Measures have been taken to incorporate this subject into the second year design studio, to complement instruction in courses in technology and professional practice.

12.28 Technical Documentation
Measures have been taken to incorporate this condition in the second year design studio and in technology courses.

12.30 Program Preparation
Measures are being taken to incorporate this condition into the second year design studio.

Summary of Other Changes

1. The second year Spring studio has been transformed from an option studio to a core studio focused on integrated design and design development, including the integration of specialist consultants in engineering and construction.
2. A concentration was created in Ecological Architecture.
3. Elective courses were introduced on architecture and race, contemporary urbanism, and ecological architecture; advanced electives in emerging technologies were updated.

2007 NAAB STATISTICS REPORT

SCHOOL: UNIVERSITY OF PENNSYLVANIA

ACSA REGION: EC NE SE SW WC W (circle one)

PUBLIC or PRIVATE (circle one)

STUDENT DATA

For Accredited Programs Only

	4 Year **PreProf	B.Arch Five-year	B.Arch **PostPreProf	B.Arch ***PostNonProf	M.Arch Five-year	M.Arch **PostPreProf	M.Arch ***PostNonProf
Full-Time Students						204	
Part-Time Students						2	
FTE Students						205	
Arch Design Studio Students						200	
Students Working Part-Time						N/A	
Outside Stud. Serv. by Dept.						76	
African-American Students						5	
Native American Students*						2	
Asian/Pacific Isle Students						23	
Hispanic Origin Students						13	
Women Students						88	
Foreign Students						42	
Total Degrees Awarded						69	
Grads. Fin. Estab. No. Yrs.						67	
Degrees Awarded Women						35	
Degrees Awarded Afri-Amer						0	
Degrees Awarded Amer. Ind.						0	
Degrees Awarded Asi/Pac. Isl.						13	
Degrees Awarded Hispanics						2	
Min Req. SAT/ACT/GRE Score						N/A	
Number of Applicants						588	
Number Accepted						210	
Enrollment Target/Goal						78	
Student Studio/Faculty Ratio						14:1* (*maximum)	

*Include Eskimos and Aleuts
**Includes four-year program component of 4+1 yrs. B.Arch degree and 4+2 yrs. M. Arch degree.
***Non-Professional: baccalaureate degree that is not part of an accredited professional program.

FACILITY/RESOURCE DATA

Departmental Library LCNA or 720-729 Collection	n/a	
Total Architecture Collection in Departmental Library	n/a	
University Library LCNA or 720-729 Collection	50,000 titles	
Total Architecture Collection in University Library	110,000	
Departmental Library Architecture Slides	n/a	
University Library Architecture Slides	est. 100,000 of whole collection of ca. 500,000	
Departmental Library Architecture Videos	est. 150 of whole collection of 347	
Staff in Dept. Library	10	
Number of Computer Stations *	62	
Amount Spent on Information Technology	$125,000	
Annual Budget for Library Resources	410,000	
Per-Capita Financial Support Received from University	n/a	not public information
Private Outside Monies Received by Source	n/a	not public information
Studio Area (Net Sq. ft.)	13,000	
Total Area (Gross Sq. ft.)	42,000	

(*available in School of Design computing labs; first year students are required to have their own computer)

2007 NAAB STATISTICAL REPORT

SCHOOL: UNIVERSITY OF PENNSYLVANIA

FULL-TIME FACULTY SALARIES	Number	Minimum	Average	Maximum	Univ. Avg.	
Professor	6	$115,614	125,400	$145,816	n/a	
Associate Professor	4	$87,731	93,209	$105,474	n/a	
Assistant Professor	2	$67,743	68,972	$70,200	$54350*	*Univ Min
Instructor	4	51,000	$61,350	$66,000	n/a	

FACULTY DATA	Department Total
Full-Time Faculty	18
Part-Time Faculty	57
Full-time Equivalent (FTE) Faculty	37
Tenured Faculty	10
Tenure-Track Positions	4
FTE Administrative Positions	n/a
Faculty Engaged in Service to Comm.	n/a
Faculty Engaged in Service to Univ.	n/a
FT Faculty who are U.S. Licensed Registered Architects	4
PT Faculty who are U.S. Licensed Registered Architects	12
Practicing Architects	32
FTE Graduate TAs	2
FT Faculty Avg. Contact Hrs/Wk	15
PT Faculty Avg. Contact Hrs/Wk	10 to 15

NO. FULL-TIME FACULTY CREDENTIALS	
Ph.D.	5
D. Arch	0
M.A. or S.	3
Prof. M. Arch	5
B. Arch	3
Post Prof. Masters	3
Other	12

	FT	PT	Tenured	Prof.	Assoc.	Assist.
African-American Faculty	0	2	0	0	0	0
Native American Faculty*	0	0	0	0	0	0
Asian/Pacific Island Faculty	2	7	1	1	2	0
Hispanic Origin Faculty	1	4	1	1	1	0
Women Faculty	6	7	2	2	2	2

*Include Eskimos and Aleuts

UNIVERSITY OF PENNSYLVANIA
School of Design
Department of Architecture

National Architectural Accreditation Board

Annual Report 2007/08

Prepared by William W. Braham, Interim Chair
December 4, 2008

Report on Progress toward Conditions not Met in Visiting Team Report, May 2004

12.14 Accessibility
Measures have been taken to incorporate this condition in the second year design studios.

12.24 Building Code Compliance
Measures have been taken to incorporate this subject into the second year design studios, to complement instruction in courses in technology and professional practice.

12.28 Technical Documentation
Measures have been taken to incorporate this condition in the second year design studios and in technology courses.

12.30 Program Preparation
Measures are being taken to incorporate this condition into the second year design studios.

Summary of Other Changes

1. The second year Spring studio (arch 602) has been further developed as a core studio focused on integrated design and design development, including the integration of specialist consultants in engineering and construction. Students now work in collaborative teams throughout the semester.
2. A concentration in Ecological Architecture was formally offered and granted certificates to 8 students, with an additional 8 students continuing in the concentration
3. An inter-school program in Integrated Product Design (MSE) was developed in collaboration with the school of Engineering and the Wharton School of Business, to be formally offered in 2008-09. A new course on the design of contemporary products was developed, and 3 other elective courses refined to include full-scale fabrication.
4. Elective courses were introduced on architecture and race, contemporary urbanism, and ecological architecture; advanced electives in emerging technologies were updated.

Annual Report Submission

Questionnaire Detail (Edit)

Your last Review Time was 1/16/2009 6:40:23 PM.
You have reviewed 16 times
You are modifiying the Annual Report Submission for University of Pennsylvania. If this is not correct please contact NAAB immediately.
Annual Report Submission for the year 2008.
This Annual Report Submission has been submitted already.
Submission Time: 1/16/2009 6:40:23 PM

Introduction

Starting in the fall of 2008, the National Architectural Accrediting Board (NAAB) is launching a new online Annual Report Submission (ARS) system with a deadline of November 30, 2008.

Continuing accreditation/candidacy is subject to the submission of *Annual Reports*. They are then reviewed by the NAAB staff and a response is prepared and sent to the program. Under certain conditions, three-year terms of accreditation may be extended to six-year terms on the basis of the material provided in *Annual Reports*. Conversely, if an acceptable *Annual Report* is not submitted to the NAAB by the following January 15 the NAAB may consider advancing the schedule for the program's next accreditation sequence.

Part I (Annual Statistical Report) captures statistical information on the institution in which an architecture program is located and the degree program. For the purposes of the report, the definitions are taken from the glossary of terms used by the Integrated Postsecondary Education Data System (IPEDS)[1]. Much of the information requested in Part I must be consistent to the *Institutional Characteristics, Completion and 12-Month Enrollment Report* submitted to IPEDS in the fall by the institution. Data submitted in this section is for the previous fiscal year. An appropriate representative of the institution's administration should verify data prepared by architecture programs.

Part II (Narrative Report) is the report in which a program responds to the most recent Visiting Team Report (VTR). The narrative must address *Section 1.4 Conditions Not Met* and *Section 1.5 Causes of Concern* of the VTR. Part II also includes a description of changes to the program that may be of interest to subsequent visiting teams or to the NAAB. In addition, this part is linked to other questions in Part I for which a narrative may be required. If a program had zero "not mets" in the most recent VTR or was "cleared of future reporting" in subsequent annual reports, no report is required in Part II.

Submission

Annual Reports are submitted through the NAAB's Annual Report Submission system during the month of November each year. Programs visited during the previous spring or scheduled to be visited the following spring are required to submit Part I (Annual Statistical Report) only (e.g., for fall 2008, programs visited in spring 2008 or scheduled for spring 2009 only submit their statistical reports – Part I).

NAAB Response

Annual Reports are reviewed by the NAAB staff and an NAAB response is sent to the program,

generally in the early spring. The NAAB administrative response to the *Annual Report* will identify whether additional or continued reporting is required for any of the conditions or causes of concern identified in the most recent VTR. Programs are encouraged to include these administrative responses as supplemental material in subsequent APRs.
The NAAB uses *Annual Reports* to maintain current information about the programs it accredits and track selected information that is relevant to compliance with the NAAB Conditions. Prior to accreditation visits or focused evaluations, visiting teams receive a summary report of program annual statistics that cover the years since the school's last accreditation visit and an aggregate summary of data received from all accredited programs for the same period.

The statistics collected in this survey will be made available to all participating accredited and candidate schools. In order to maintain confidentiality, information may only be reported in the aggregate. Information that is available to the public will be posted on the NAAB website.

The NAAB uses the information to support accreditation activities and to provide relevant reports to other collateral organizations like The American Institute of Architects or the National Council of Architectural Registration Boards.

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[1] IPEDS is the "core postsecondary data collection program for the National Center for Education Statistics. Data are collected from all primary providers of postsecondary education in the [U.S.] in areas including enrollments, program completions, graduation rates, faculty, staff, finances, institutional prices, and student financial aid." For more information see http://nces.ed.gov/IPEDS/

PART I - ANNUAL STATISTICAL REPORT
SECTION A. INSTITUTIONAL CHARACTERISTICS
This section captures aggregated information about the home institution for each architecture program. Wherever possible, this information should be the same as that reported by the institution to IPEDS in its most recent Institutional Characteristics, Completion and 12-month Enrollment report.

(for inclusion on the NAAB website)

Institution Name:	University of Pennsylvania
Academic Unit Name:	Department of Architecture
Address 1:	207 Meyerson Hall
Address 2:	210 South 34th Street
City:	Philadelphia
State:	PA
Zip:	19104-6311
Architecture Program Tel. No:	215.898.5728
Architecture Program School Fax No:	215.573.2192
Architecture Program School URL:	http://www.design.upenn.edu/new/arch/index.php
Email address for general	mertins@design.upenn.edu

In order to modify your organization information please visit the ACSA Guide site.

Private Not for profit
Doctoral/Research Universities - Intensive
Middle States Association of Colleges and Schools (MSACS)

5. Who has direct administrative responsibility for the architecture program?

Name	william braham
Title	interim chair
Office Tel. No	215 898 5728
Fax No	215 573 2192
Email Address	brahamw@design.upenn.edu

6. To whom should inquiries regarding this questionnaire to be addressed?

Name	dionysia petrakis
Title	departmental coordinator
Office Tel. No	215 898 5728
Fax No	215 573 2192
Email Address	petrakid@design.upenn.edu

7. Who is the administrator responsible for verifying data (and completing IPEDS reports) at your institution?

Name	Stacey Lopez
Title	Assistant VP, Institutional Research and Analysis
Office Tel. No	2158985897
Fax No	2155735839
Email Address	IRAmail@pobox.upenn.edu

(Aggregated for the Institution; this information should be the same as that reported to IPEDS for the last fiscal year)

Total undergraduate enrollment:	54
Total graduate enrollment:	163
25th percentile ACT score for undergraduates enrolling on the last fiscal year	0
75th percentile ACT score for undergraduates enrolling on the last fiscal year	0
25th percentile SAT score for undergraduates enrolling on the last fiscal year	0
75th percentile SAT score for undergraduates enrolling on the last fiscal year	0
Average GRE score for graduates enrolling in the last fiscal year (not including specialized programs like law, medicine, business or other programs for which a specialized entrance examination is required):	1144

	Male	Female
Total	23	31
American Indian/Alaska Native	0	0
Asian or Pacific Islander	3	8
Black, Non-Hispanic	1	2
Hispanic	2	2
White, Non-Hispanic	15	15
Other	0	0

Declined to or Did Not Supply	2	4

	Male	Female
Total	93	70
American Indian/Alaska Native	0	2
Asian or Pacific Islander	8	13
Black, Non Hispanic	3	4
Hispanic	9	5
White, Non-Hispanic	68	43
Other	1	3
Declined to or Did Not Supply	4	0

SECTION B. NAAB-ACCREDITED ARCHITECTURE PROGRAMS
This section captures information about the specific NAAB-accredited degree programs offered by the institution, unless otherwise noted in the instructions.
B. Arch.
M. Arch. X
D. Arch.

Discipline	Degree	Guide Display
Architecture	PhD	PhD
Architecture	M.S. Architecture	MS

No
If yes, a report is required in PART II – Narrative Report that outlines the plans and planning for the new program.
No
If yes, a report is required in PART II – Narrative Report that outlines the plans and planning for the new program.
2 Semesters or Trimester
The program(s) in this section are dependent on your selection in Section B, Question 1.
M. Arch.: 131
The program(s) in this section are dependent on your selection in Section B, Question 1.
a. Indicate the total number of credit hours taken at your institution to earn each NAAB accredited degree offered by your institution.
M. Arch. Pre-Professional: 205
M. Arch. Non Pre-Professional: 0
b. By degree, how many of those credit hours are assigned to general education?
M. Arch. Pre-Professional: 0
M. Arch. Non Pre-Professional: 0
c. By degree, what is the average number of credits each full time student completes per academic term?
M. Arch. Pre-Professional: 33
M. Arch. Non Pre-Professional: 0
No
SECTION C. TUITION, FEES AND FINANCIAL SUPPORT FOR STUDENTS IN NAAB-ACCREDITED PROGRAMS
B Arch.
If this section is not applicable, please enter all zero's (0).

	Annual Tuition	Annual Fees	Per Hour/Term/Year
Full-Time			
In-State	0	0	Per Academic Year

Out-of-State	0	0	Per Academic Year
Part-Time			
In-State	0	0	Per Academic Year
Out-of-State	0	0	Per Academic Year

M Arch.
If this section is not applicable, please enter all zero's (0).

	Annual Tuition	Annual Fees	Per Hour/Term/Year
Full-Time			
In-State	0	0	Per Academic Year
Out-of-State	0	0	Per Academic Year
Part-Time			
In-State	0	0	Per Academic Year
Out-of-State	0	0	Per Academic Year

a. Does the institution offer discounted or differential tuition for a NAAB-accredited degree program?
If yes, please explain
No
b. Is a summer session required for any portion of your accredited degree program(s)?
Yes
If yes, what is the additional tuition and fees for the summer program?
(If no fill this section with 0s)

	Summer Tuition	Summer Fees	Per Hour/Term/Year
Full-Time			
In-State	0	0	Per Credit Hour
Out-of-State	0	0	Per Credit Hour
Part-Time			
In-State	0	0	Per Credit Hour
Out-of-State	0	0	Per Credit Hour

Does the institution offer discounted or differential tuition for summer courses for a NAAB-accredited degree program?
If yes, please explain
No
What is the average per student expenditure for students enrolled in NAAB accredited degree programs? This is the total amount of goods and services, per student, used to produce the educational services provided by the NAAB-accredited program.

The program(s) in this section are dependent on your selection in Section B, Question 1.
M. Arch. Student Exp 59450
What was the total amount of financial aid (Grants, loans, assistantships, scholarships, fellowships, tuition waivers, tuition discounts, veteran's benefits, employer aid [tuition reimbursement] and other monies [other than from relatives/friends] provided to students to meet expenses. This includes Title IV subsidized and unsubsidized loans provided directly to student) provided by the institution to students enrolled in each program(s) leading to a NAAB accredited degree during the last fiscal year?

The program(s) in this section are dependent on your selection in Section B, Question 1.

Financial Aid provided to graduate students in NAAB-accredited programs:

Total Graduate Financial Aid for last fiscal year	237288
Average Graduate Financial Aid per student	30000

What was the total number of graduate-level students employed on a part-time basis for the primary purpose of assisting in classroom or laboratory instruction or in the conduct of research during the last fiscal year within the NAAB-accredited programs offered by your institution? Please include: graduate assistant, teaching assistant, teaching associate, teaching fellow or research assistant in your calculation.

39

SECTION D. STUDENT CHARACTERITICS FOR NAAB-ACCREDITED DEGREE PROGRAMS

(If your institution offers more than one program, please provide the information for each program separately)

	Male	Female
Total	371	352
American Indian/Alaska Native	1	1
Asian or Pacific Islander	31	46
Black, Non-Hispanic	3	8
Hispanic	17	12
White, Non-Hispanic	159	162
Other	6	6
Declined to or Did Not Supply	154	117

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers and do not include '$' or ',"' A person can only be counted in one group.

	Male	Female
Total	153	130
American Indian/Alaska Native	0	1
Asian or Pacific Islander	15	25
Black, Non-Hispanic	1	2
Hispanic	8	4
White, Non-Hispanic	71	57
Other	4	1
Declined to or Did Not Supply	54	40

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers and do not include '$' or ',"' A person can only be counted in one group.

	Full-Time		Part-Time	
	Male	Female	Male	Female
Total	91	69	2	1
American Indian/Alaska Native	0	2	0	0
Asian or Pacific Islander	7	13	1	0
Black, Non-Hispanic	3	4	0	0
Hispanic	9	5	0	0

White, Non-Hispanic	67	42	1	1
Other	1	3	0	0
Declined to or Did Not Supply	4	0	0	0

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers and do not include '$' or ',"' A person can only be counted in one group.

	Full-Time		Part-Time	
	Male	Female	Male	Female
Total	91	69	2	1
American Indian/Alaska Native	0	2	0	0
Asian or Pacific Islander	7	13	1	0
Black, Non-Hispanic	3	4	0	0
Hispanic	9	5	0	0
White, Non-Hispanic	67	42	1	1
Other	1	3	0	0
Declined to or Did Not Supply	4	0	0	0

a. Total number of credits in professional architectural studies taken by full time students for the last fiscal year:
2173
b. Total number of credits in professional architectural studies taken by part-time students in the last fiscal year:
21

SECTION E. DEGREES AWARDED
(The information requested in this section should be provided by the unit within the institution responsible for submitting the annual Completion Report to the National Center for Education Statistics and IPEDS.)

	B. Arch.		M. Arch.		D. Arch.	
	Male	Female	Male	Female	Male	Female
Total	0	0	56	36	0	0
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0
White, Non-Hispanic	0	0	0	0	0	0
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	56	36	0	0

SECTION F. RESOURCES FOR STUDENTS AND LEARNING IN NAAB-ACCREDITED PROGRAMS
(all forms of media)
Catalogued Titles on Main campus: 113000
Catalogued Titles on Other locations: 50000
(all forms of media)
Library of Congress NA or Dewey 720-729 Catalogued Titles on Main campus: 113000

Library of Congress NA or Dewey 720 729 Catalogued Titles on Other locations:	50000
Permanent Workstations on Main Campus:	90
Permanent Workstations at Other locations:	0

Resource Type	Available?
Shop	Yes
Computer Facilities (Lab)	Yes
Computer Output Facilties (Plotters, Specialized plotting)	Yes
Digital Fabrication Facilities	Yes
Wireless Network	Yes
Image Collection (Slide Library)	Yes
Photo Studio/Darkroom	Yes
Lecture Series	Yes
Gallery/Exhibits	Yes
Other	Yes

If Other Resources, Please describe:

SECTION G. HUMAN RESOURCE SUMMARY (Architecture Program)

Faculty are defined as follows: Persons identified by the institution as such and typically those whose initial assignments are made for the purpose of conducting instruction, research or public service as a principal activity (or activities). They may hold academic rank titles of professor, associate professor, assistant professor, instructor, lecturer or the equivalent of any of those academic ranks. Faculty may also include the chancellor/president, provost, vice provosts, deans, directors or the equivalent, as well as associate deans, assistant deans and executive officers of academic departments (chairpersons, heads or the equivalent) if their principal activity is instruction combined with research and/or public service. The designation as "faculty" is separate from the activities to which they may be currently assigned. For example, a newly appointed president of an institution may also be appointed as a faculty member. Graduate, instruction, and research assistants are not included in this category.

Those members of the instructional/research staff who are employed full time and whose major assignment is instruction, including those with release time for research. Includes full-time faculty for whom it is not possible to differentiate between reaching, research, and public service because each of these functions is an integral component of his/her regular assignment:

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers and do not include '$' or ',' A person can only be counted in one group.

Professor

	Tenured		Tenure-Track		Non-Tenure-Track	
	Male	Female	Male	Female	Male	Female
Total	5	1	0	0	0	0
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0
White, Non-Hispanic	4	1	0	0	0	0
Other	1	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0

Associate Professor

	Tenured		Tenure-Track		Non-Tenure-Track	
	Male	Female	Male	Female	Male	Female
Total	2	1	0	0	1	0
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0
White, Non-Hispanic	2	1	0	0	1	0
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0

Assistant Professor

	Tenured		Tenure-Track		Non-Tenure-Track	
	Male	Female	Male	Female	Male	Female
Total	0	0	0	2	0	0
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0
White, Non-Hispanic	0	0	0	2	0	0
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0

Instructor

	Tenured		Tenure-Track		Non-Tenure-Track	
	Male	Female	Male	Female	Male	Female
Total	0	0	0	0	5	1
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0
White, Non-Hispanic	0	0	0	0	0	0
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	5	1

Total credit hours taught by full time faculty: 11

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers

and do not include '$' or ',"" A person can only be counted in one group.

Professor

	Tenured		Tenure-Track		Non-Tenure-Track	
	Male	Female	Male	Female	Male	Female
Total	1	1	0	0	2	2
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	1	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	1	0
White, Non-Hispanic	1	1	0	0	0	2
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0

Associate Professor

	Tenured		Tenure-Track		Non-Tenure-Track	
	Male	Female	Male	Female	Male	Female
Total	0	0	0	0	2	1
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0
White, Non-Hispanic	0	0	0	0	2	1
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0

Assistant Professor

	Tenured		Tenure-Track		Non-Tenure-Track	
	Male	Female	Male	Female	Male	Female
Total	0	0	0	0	0	0
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0
White, Non-Hispanic	0	0	0	0	0	0
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0

Instructor

	Tenured		Tenure-Track		Non-Tenure-Track	

	Male	Female	Male	Female	Male	Female
Total	0	0	0	0	53	14
American Indian/Alaska Native	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	5	3
Black, Non-Hispanic	0	0	0	0	3	0
Hispanic	0	0	0	0	2	2
White, Non-Hispanic	0	0	0	0	43	9
Other	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0

Total credit hours taught by part-time faculty: 16

Non-tenure track faculty service in a temporary or auxiliary capacity to teach specific courses on a course-by-course basis. Includes both faculty who are hired to teach an academic degree-credit course and those hired to teach a remedial, developmental or ESL course; whether the later three categories earn college credit is immaterial. Excludes regular part-time faculty, graduate assistants, full-time professional staff who may teach individual courses (such as the dean or academic advisor) and appointees who teach non-credit courses exclusively).

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers and do not include '$' or ',"' A person can only be counted in one group.

	Professor		Assoc. Prof.		Assist. Prof.		Instructor	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	0	0	0	0	0	0	0	0
American Indian/Alaska Native	0	0	0	0	0	0	0	0
Asian or Pacific Islander	0	0	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0	0	0
White, Non-Hispanic	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Declined to or Did Not Supply	0	0	0	0	0	0	0	0

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers and do not include '$' or ',"' A person can only be counted in one group.

	Full Time		Part Time		Adjunct	
	Male	Female	Male	Female	Male	Female
D. Arch.	0	0	0	1	0	0
M. Arch.	8	5	47	13	0	0

B. Arch.	0	0	2	0	0	0
Ph.D. in architecture	4	1	4	0	0	0
Ph.D. in other discipline	1	0	5	0	0	0
Post-professional master's in architecture	0	0	0	0	0	0
Other degrees	0	0	2	0	0	0
Registered in U.S. Jurisdiction	9	3	28	9	0	0

Please fill out these tables completely, entering 0 for blanks. Please use whole, positive integers and do not include '$' or ',' A person can only be counted in one group.

	Number	Minimum	Avg.	Max.	Univ. Avg.
Professor	6	110748	127982	151649	160865
Assoc. Prof.	4	90363	93309	98583	106229
Assist. Prof.	2	70114	71385	72657	91784
Instructor	6	5000	12800	35000	0

PART II: NARRATIVE REPORT
In addition to Annual Statistical Report (PART I), NAAB-accredited architecture degree programs are required to submit a Narrative Report (PART II).
This report has two sections:

- Describe the architecture program's responses to the most recent Visiting Team Report (VTR). The narrative must address Section I.4 Conditions Not Met and Section I.5 Causes of Concern of the VTR.
- Report changes to the architecture program since the last Annual Report was submitted.

Please note that a YES answer to Section B, Questions 3 or 4 requires the inclusion of a narrative report.

Annual Report required:
ARQID_105_FileTypeID_2.pdf
Uploaded: 12/4/2008 11:33:04 AM
Size: 7.44 KB
Upload a new Document here.

REVIEW AND SUBMIT REPORT

REVIEW REPORT
Selecting Review Report (above) will prepare a report regarding the completion and accuracy of your report. If the data submitted in PART I is complete then a preview of the report with any incorrect data clearly labeled will be provided. If any data is missing from the report a list of missing data will be provided.

NAAB Response to Annual Reports

NAAB RESPONSE TO UNIVERSITY OF PENNSYLVANIA
2007 ANNUAL REPORT

Rec'd Date: 6/25/2007
Date of Visit: N/A

Section One:
Checklist of required elements

1. Statistical Report	√	Included	Not Included
2. Response to deficiencies identified in the most recent VTR	√	Included	Not Included
3. Causes of Concern	N/A	Included	Not Included
4. Changes in the accredited program	√	Included	Not Included

Section Two (A):
Assessment of response to deficiencies

Condition 12.14 Accessibility
Continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful.

Criterion 12.24 Building Code Compliance
Continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful.

Criterion 12.28 Technical Documentation
Continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful

Criterion 12.30 Program Preparation
Continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful.

Section Two (B):
Assessment of response to causes of concern

There were no Causes of Concern reported in the 2004 VTR.

Section Three:
Changes to the accredited program

1. The second year spring studio has been transformed from an option studio to a core studio focused on integrated design and design development, including the integration of specialist consultants in engineering and construction
2. A concentration in Ecological Architecture has been created.
3. Elective courses were introduced on architecture and race, contemporary urbanism and ecological architecture; advanced electives in emerging technologies were updated.

† Although an area may be marked "satisfied, no further reporting required," the next visiting team may include in its report its own assessment of the program's response to the deficiency.

NAAB RESPONSE TO UNIVERSITY OF PENNSYLVANIA
2008 ANNUAL REPORT

Rec'd Date: January 16, 2008
Year of Next Visit: 2010

Section One:
Checklist of required elements

Part I Statistical Report	√Included	Not Included
Part II Narrative Report	√Included	Not Included

Section Two:
Assessment of Narrative Report

The narrative included as PART II of the Annual Report is identical to that submitted in 2007; as such, the program is requested to please submit evidence of measures taken to address these conditions.

DEFICIENCIES

Condition 12.14 Accessibility
The program is requested to continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful.

Criterion 12.24 Building Code Compliance
The program is requested to continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful.

Criterion 12.28 Technical Documentation
The program is requested to continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful.

Criterion 12.30 Program Preparation
The program is requested to continue reporting on efforts to address this deficiency. A course syllabus and description of assignments indicating how this criterion is met would be helpful

CAUSES OF CONCERN

There were no causes of concern reported in the 2004 VTR.

CHANGES TO THE ACCREDITED PROGRAM

The program reports an inter-school program in Integrated Product Design (MSE) in collaboration with the School of Engineering and the Wharton School of Business. The additional changes were reported previously.

† Although an area may be marked "satisfied, no further reporting required," the next visiting team may include in its report its own assessment of the program's response to the deficiency.

4.7 Catalog (or URL for retrieving online catalogs and related material)
URL for on-department web site: http://www.design.upenn.edu/architecture

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Design differentiates.

The great cities of the world understand that civic design makes a difference. Clients of architecture and landscapes seek out the best designers to create places of special character. Manufacturers increasingly realize that design can make or break their products. Wonderful art touches all who are exposed to it.

PennDesign is a place where creative professionals can develop the skills and professional disciplines to become effective designers. We use "design" in the broad sense that includes both creating exciting objects and places, and influencing the social and political processes that have a bearing on the built and natural world. We work at all scales, globally but also recognizing cultural differences, accepting no boundaries to our endeavors.

Education occurs in studios and classrooms, but also outside—in the heat of debate and discussion, around exhibitions and shows, on field trips, and while collaborating with others on projects. The foundation of the School of Design is in the great tradition of Penn, linking theory with practice. Sustainability is at the core of our school, which pioneered the environmental movement. We prepare our graduates to be leaders in each of the design fields.

Gary Hack
Dean and Paley Professor

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A Look Back: The School's History

Architectural courses were first offered at the University of Pennsylvania in 1868, making this the second oldest architecture program in the United States. By the turn of the century it was well established, attracting an outstanding cadre of architects: Walter Cope, John Stewardson, Frank Miles Day, and Wilson Eyre, who formed the first Philadelphia School. In 1903, these luminaries were joined by the youthful Frenchman Paul Philippe Cret, whose inspired teaching—coupled with his having won seven national competitions—further helped to give luster to Penn's architectural program.

In 1914, Penn's original initiative was augmented with lectures in city planning and landscape architecture, while within another seven years fine arts and music had joined architectural studies to create an independent undergraduate School of Fine Arts, modeled on the Ecole des Beaux Arts in Paris. The School of Fine Arts joined with the Pennsylvania Academy of Fine Arts and the Museum School to offer programs in painting and sculpture. In 1924, Landscape Architecture was made into an autonomous department.

The 1950s was a decade of tremendous growth and transformation. Under the leadership of G. Holmes Perkins, Penn embraced modernism and the problems of urban renewal. City Planning became a graduate program and a department, and the landscape architecture program was refocused on urban ecology. The Department of Architecture saw the arrival of structural engineers Robert LeRicolais and August Komendant, along with architects Romaldo Giurgola, Robert Venturi, Robert Geddes, and the 1924 Penn graduate Louis I. Kahn. Kahn was a dedicated educator and philosopher and the spiritual leader of the revived Philadelphia School. In 1958 the School was renamed the Graduate School of Fine Arts, and before long, the GSFA had become a home for the leading figures in each of the disciplines. In planning they included Lewis Mumford, Charles Abrams, Britton Harris, Martin Meyerson, Edmund Bacon, Denise Scott Brown, and Ann Louise Strong. A renewed Department of Landscape Architecture came under the dynamic leadership of Ian McHarg, while Peter Shepheard, architect, landscape architect and planner, succeeded Perkins as dean. A Civic Design Program—later renamed Urban Design and led by David Crane—was established as a joint offering by Architecture and City Planning. The Fine Arts Department became a full-fledged professional program under the leadership of Piero Donzio, Neil Welliver, and Robert Engman. And in the 1980s, the school added a program in Historic Preservation.

Since its inception, one thing has remained constant at Penn: change and renewal. The need to stay vital and relevant has informed all of our choices, whether it's adding new programs—such as digital media design—or by developing new ties to other resources at Penn, including the Wharton School. In fact, the tradition of working across boundaries remains the school's core strength, and our faculty continues to include some of the most influential, groundbreaking scholars and practitioners in the world.

As a more accurate description of the School's major concerns and the advancements we have made across a variety of fields, we renamed ourselves the School of Design—known familiarly as PennDesign—in 2003, and under this new banner plan to advance Penn's leadership in design education and practice into the 21st century.

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Penn and Philadelphia

Located in the second largest city in the eastern United States—and one of the easiest to negotiate—PennDesign is situated near the heart of the Boston-Washington, D.C. corridor, immediately across the Schuylkill River from downtown Philadelphia.

Art and the city

The last few decades have seen Philadelphia blossom in an urban renaissance. For Penn students, the cultural and recreational gifts of the city are a simple extension of the University's resources. Only minutes away from campus is the new Kimmel Center for the Performing Arts, where the Philadelphia Orchestra—one of the world's premier symphonic groups—performs. Up the street is the Academy of Music, home to the Opera Company of Philadelphia and the Pennsylvania Ballet. On campus, the Annenberg Center houses dance and theater performances by national and local performing arts groups; and around town, the Philadelphia Theatre Company, the Painted Bride, and Philadanco are three among many theaters and companies that contribute to the city's eclectic offerings.

Long recognized for its outstanding architecture, with representative works by leading architects including William Strickland, Frank Furness, and Frank Lloyd Wright, the city of Philadelphia offers unparalleled visual inspiration to PennDesign students. On Penn's campus alone are fine examples of buildings by Wilson Eyre, Frank Furness, Eero Saannen Romaldo Giurgola, Louis I. Kahn, Robert Venturi, and Denise Scott Brown. The city's collection of outdoor public art is the largest in the nation. In addition to its numerous galleries and museums, the city boasts a unique "First Friday" celebration: on the first Friday evening of the month, the dozens of galleries in Philadelphia's Olde City stay open for an evening of painting and sculpture, food, and fun.

Quality of life

Much of the historical, political, cultural, professional, and entertainment activity takes place in a relatively small area in the center of town, aptly known as Center City. Famous as a center of the professions and of commerce, history, and the arts, Center City is a rarity in that it is also largely residential, here is where many of our graduate students reside. Adjacent to the Penn campus is University City, another lively neighborhood for students and families, recently undergoing a revival.

Penn students take advantage of the city's great shopping, restaurants (the Zagat Survey lists over 1000), theaters, sports palaces, night spots, and more. In short, enrolling at Penn means attending daily life in Philadelphia—a fine way to learn, first-hand, both the whys and the hows of real urban living.

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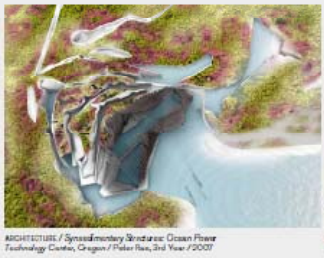
PENNDESIGN / 7



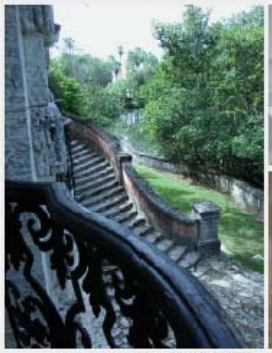
ARCHITECTURE / *Synsedimentary Structures: Ocean Power Technology Center, Oregon* / Peter Rae, 3rd Year / 2007

FINE ARTS / *Good Sir* / Gianna Delluomo, oil on canvas, 64 x 53" / 2007

HISTORIC PRESERVATION / *Treatment of the Great Hall Ceiling, Drayton Hall, Charleston, South Carolina* / 2006

LANDSCAPE ARCHITECTURE / *Montage Panoramas* / Masaflum Oka / 2007

CITY PLANNING / *Envision Lancaster, Lancaster, Pennsylvania* / Spring Studio / 2007



HISTORIC PRESERVATION / *Vizcaya, Miami, Florida* / 2006

(top) ARCHITECTURE / *Research Facility/Motel for the Santa Fe Institute* / Jessica Hogue, 2nd Year / 2006; (above) FINE ARTS / e / Catherine Belz, Matchbooks, 16' in diameter / 2007

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Architecture

Focused on the design and fabrication of buildings, architecture embraces every scale of artifact and mode of material organization—from the spoon to the city, from objects to environments, from the tangible to the ephemeral. Architectural education provides a framework for participating in the world around us as an ongoing and evolving process of creation. This is a complex process that is at once social and natural, stabilizing and changing, constraining and enabling. Architecture at Penn seeks to pilot that process so that architects may better serve society, enhance life and enrich experience. Through research, critical inquiry and experimentation we conceptualize potentials latent within the multiple systems of production that generate the spaces and structures in which people live.

Architecture finds itself today in a world that resists easy characterization. It has been called the age of globalization, information, and biotechnology; post-industrial, post-metropolitan, and post-human; a network economy, a control society, an ecological crisis. It is an age that produces theories of complexity, which are, in fact, urgently needed. Transformations of the economic-technological-social matrix over the past thirty years have affected every aspect of architecture, its place in the world, potential contribution to culture, and status as a discipline and an art.

As the modulation of life practices, interactions, rhythms, and experiences becomes the focus of economic investment, cultural interpretation, and political contestation, architecture's expertise is being reconfigured within an interwoven field of material practices, including engineering, industrial design, graphic design, new media, furniture, fashion, art and entertainment, but also ecology, urban planning, and business management. The more diverse architectural practices become, the more evident it is that the skills and modes of thinking developed through architectural education—analytic, creative, synthetic, and applied—are polymorphous and adaptable to a wide range of challenges and opportunities. Graduates today pursue diverse and hybrid careers not only in architecture but in many spheres of creativity activity.

Since 1890, architecture at Penn has emphasized the link between theoretical speculation, professional practice, and artistic expression. Our faculty are distinguished precisely by bringing these trajectories together, engendering new ways of seeing, new trajectories for imagination, and new models of practice. Since the time of Louis Kahn and Robert le Ricolais, the program has maintained a focus on architecture's relationship with technology, understood in the broadest sense as technologies of construction, representation and organization. Today, the implications and potentials of digital technologies are pursued in every aspect of study as they are in every aspect of the building industry and professional practice.

The Master of Architecture (M.Arch. I) is a comprehensive and rigorous professional program, a first degree in the field that prepares graduates for the full range of activities in the profession. It provides a thorough base of knowledge in history, theory, technology, ecology, society, and professional practice, while developing skills in design through an intensive sequence of design studios. Studios are the focus of the program and are supported by courses in visual studies that develop skills first in traditional modes of drawing and conceptualization, then in digital and new media. At the upper levels of the program students establish individual trajectories by selecting from a range of elective studios and courses with leading figures in design, technology and theory. The final year culminates in advanced research studios directed by leading designers or in an independent thesis. Summer programs abroad and studios based in other countries provide opportunities for international studies. The program nurtures critical, creative and independent thinking and aims to realize latent potentials within an ever-changing world.

The Master of Architecture II: Post-Professional Degree (M.Arch. II) is a one-year (two-semester) program intended for individuals who hold a five-year Bachelor of Architecture professional degree and seek to extend their previous education towards areas of innovation. This design-based program allows students to pursue an individually directed course of study by choosing from a wide range of research studios and elective courses offered within the Master of Architecture program. In the Fall, the post-professional studio engages challenges and opportunities presented by changes in society, technology and urban experience. It explores alternative models and markets for practice, along with new directions in manufacturing and new tools for design. In the Spring, students choose from among the Research Studios, which combine research to specific topics with experimental approaches to design. Instructors in these studios have included Cecil Balmond (algorithmic design), Winka Dubbeldam (new technologies), Homa Farjadi (hybridization), Stephen Kieran and James Timberlake (global manufacturing), Ali Rahim (elegance), Rhett Russo (natural models) and Marion Weiss (architecture-landscape integration).

The Master of Science degree is a two-semester program of advanced self-directed studies for students seeking greater understanding of the relationship between the discipline and the profession of architecture. It is administered by the Graduate Group in Architecture—consisting of faculty in the Departments of Architecture, Landscape Architecture and the History of Art—which also administers the Ph.D. Program.

The Ph.D. Program in Architecture is preeminent in the fields of theory, technology and representation. Its graduates act as a reflective leaven to the architectural profession, providing historical and theoretical context for current practice throughout the world. This program serves individuals who wish to make significant contributions to research and scholarship in the discipline.

Scholarship at Penn operates under a double constraint: the development of knowledge that is both descriptive and productive. Although dedication to productive knowledge is uncommon to many Ph.D. programs, it is entirely relevant to architecture. Marx's dream for philosophy—to change not merely interpret the world—is an unremarkable commonplace of architectural thought. Architecture is a form of engagement par excellence, aimless if not oriented toward given conditions, intent on their transformation. The particularity of its productive sort of knowledge, that it gets its hands dirty in the actual transformation of the environments in which we live, has been and remains a central concern of Penn's architectural scholarship.

Current topics of doctoral studies include key figures and issues of modern architecture and landscape architecture in the United States, Latin America and Asia. Figures studied include Max Bill, Max Cetto, Lawrence Halprin, Howe and Lescaze, John Nolen, Ernesto Rogers, and Bruno Taut. Topics being examined include race, health, emerging technologies, the nature of materials, building simulation, and energy. Cities in the U.S. and abroad are also being studied: Philadelphia and New York, as well as Berlin, Shanghai, Kuwait City and Bangkok.

An undergraduate B.A. program with a major in architecture is offered by the College of Arts and Sciences. This liberal arts studio-based program offers concentrations in Design, and History, Theory and Criticism. In addition, there is an Intensive Major qualifying an undergraduate student in the Design Concentration for advanced standing in the Master of Architecture professional degree program.

FACULTY
Detlef Mertins, Chair
William Braham, Associate Department Chair
Winka Dubbeldam, Director, Post-Professional Program
Tony Atkin
Cecil Balmond
Homa Farjadi
Richard Farley
Annette Fierro
Helene Furjan
Gary Hack
Stephen Kieran
David Leatherbarrow
Ali Malkawi
Peter McCleary
Enrique Norten
Ali Rahim
Witold Rybczynski
James Timberlake
Cathrine Veikos
Marion Weiss
Richard Wexler

GRADUATE GROUP FACULTY
David Leatherbarrow, Chair
William W. Braham
Anita Berrizbeitia
David Brownlee
James Corner
Annette Fierro
Helene Furjan
Gary Hack
Renata Hejduk
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Randall Mason
Frank G. Matero
Peter McCleary
Detlef Mertins
Michael Meister
Ali Rahim
Witold Rybczynski
Cathrine Veikos
Marion Weiss

LECTURERS
Mohamed Al Khayer
Charles Arena
Julie Beckman
Charles Capaldi
Jose Castillo
Alberto Cavallero
Jonas Coersmeier
Lauren Crahan
Charles Davis
Manuel DeLanda
Justin Dilea
Scott Erdy
Daniela Fabricius
Lindsay Falck
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Muscoe Martin
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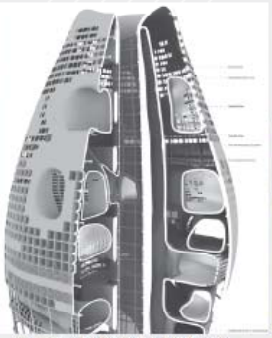
Larry Mitnick
Naji Mougaya
Brian Phillips
Alex Pincus
Shawn Rickenbacker
Gavin Riggall
Rhett Russo
David Ruy
Jenny Sabin
Dalibor Vesely
Neil Woodger
Adrienne Yancone
Guy Zucker

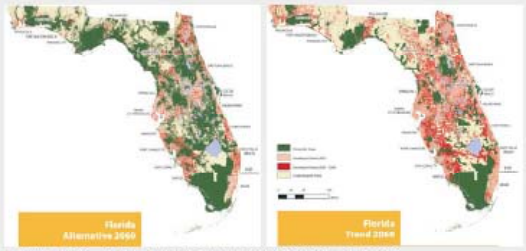
DEPARTMENT OF ARCHITECTURE
207 Meyerson Hall
arch@designupenn.edu

FINE ARTS / *Navigating the Ecstasy* / Alexis Granwell, foam, wood, wire, fabric, and latex paint, 2 panels 96 x 96 x 120" and 84 x 84 x 120"/2006

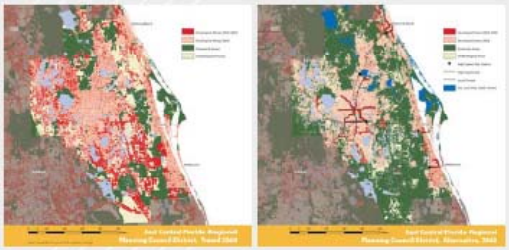


ARCHITECTURE / *HOK_Rise/Vertical Artist Studios in LES, Manhattan* / Matthew Lake, Andrew Lucia, Andrew Rugglos, 2nd Year / 2007

HISTORIC PRESERVATION / *English Garden and Cultural Landscape, Mount Edgcumbe Estate, Cornwall, England* / 2007



CITY PLANNING / *An Alternative Future, Florida in the 21st Century 2020 2040 2060* / Spring Studio / 2007



City and Regional Planning

Few professions offer the variety of activities, intellectual stimulation, creative outlets, and tangible rewards as city and regional planning. Focusing on the growth and development of neighborhoods, cities, regions, states, and nations, its practitioners help shape communities and environments in response to the needs of their citizens.

Never has the demand for city and regional planning been greater nor its mission so critical. Today's practitioners oversee land use decisions, organize transportation and infrastructure networks, explore new means to satisfy housing needs, invent innovative approaches to strengthening metropolitan economies, encourage sustainable development, and synthesize public and private actions into comprehensive plans. Their plans balance the aspirations of the citizens, the limitations of resources, the imperatives of technology, and the realities of governance.

Few cities offer a greater range of opportunities for studying city and regional planning than Philadelphia. Among America's most populous cities, its clear neighborhood organization allows for easy comprehension of smaller areas and its location in the Northeast corridor provides exposure to the full range of metropolitan issues. The curriculum of Penn's Department of City and Regional Planning takes advantage of Philadelphia's varied, vibrant, and challenging scene.

The Department of City and Regional Planning offers two degrees: the Master of City Planning (M.C.P.) and the Doctor of Philosophy (Ph.D.) in City Planning, and has certificate programs for advanced study in three areas of specialization: community and economic development; land use, transportation and environment; and urban development and design. Also available are certificate programs in Historic Preservation, Real Estate Design and Development, and Urban Design. (The M.C.P. degree holds full accreditation from the Planning Accreditation Board, the national certifying agency.)

The two-year Master in City Planning program calls for completion of 19 course units including a ten course unit core curriculum and a five course unit concentration focused on the student's interests. All master's candidates participate in an internship in the summer between their first and second years.

Departmental faculty includes many of the region's most distinguished practitioners as well as scholars of international repute. Classes employ Philadelphia cases, take field trips along the New York-Washington corridor, integrate national and international concerns, and relate to the extensive literature of the field. Students hold internships in the public, private, and non-profit sectors. Studios partner with local, regional, and international clients. For example, in the last year, students undertook work for the Fundación Metropoli (Madrid), looking at a megaregion extending from Milan to Madrid; Lancaster (PA) city government, exploring transit-oriented development; Philadelphia Center City District, studying industrial and grey area conversion and 1,000 Friends of Florida, undertaking a 50 growth management study.

The degree and certificate programs reflect Penn's long-standing strengths in community and economic development, environmental planning and land conservation, physical planning and design, transportation and infrastructure planning, and urban development and real estate. In addition, the core program assures that Penn graduates will possess skills in advanced analytical methods, geographic information systems (GIS) and presentation techniques, and critical thinking and professional writing.

The Department of City and Regional Planning has attracted exceptional faculty and students and has a distinguished record of educating leaders of the profession. Penn faculty have received the largest number of Distinguished Educator Awards from the Association of Collegiate Schools of Planning. They are prolific researchers and authors, national and international leaders in the profession, sought-after lecturers and consultants, and exceptional instructors. The Department has the largest cohort of graduates and faculty who have become Fellows of the American Institute of Certified Planners (FAICP). Its graduates hold exciting, reasonable positions in the private, public and non-profit sectors throughout the world.

Ph.D. Program in City and Regional Planning

The Ph.D. program in the Department of City and Regional Planning is one of the oldest doctoral programs in urban planning, dating back to the 1960s. Penn's respected faculty have guided nearly 200 graduates to the completion of their dissertation. Our graduates have assumed positions of leadership in both planning academia and the planning profession. Starting with the admissions decision that seeks to assure that each student will have a mentor who will guide that individual's work in the field of his or her choice, individual faculty members work with students to maximize their learning and personal maturation as they move toward the completion of their course work and dissertation.

The Graduate Group in City and Regional Planning is responsible for doctoral education in urban planning at Penn. It has a core faculty drawn from the department, and additional faculty drawn from related disciplines throughout the University. Each of its members has marked out one or more fields of expertise, so that the Graduate Group as a whole covers most of the major areas of planning scholarship.

Concentrations in the Ph.D. program include housing, economic development, community development, urban development and revitalization, ecological planning and environmental design, metropolitan planning, urban growth modeling, transportation and infrastructure planning of cities and regions, urban spatial analysis including geographic information systems, history and culture of cities, design and organization of planning processes, and urban design.

All applicants must have a bachelor's degree. Candidates with graduate degrees in city and regional planning are usually preferred. For some areas of specialization, additional preparation is required.

Students must complete 20 courses toward which the Graduate Group chair may approve up to eight to be credited from master's degree work at another university (for those with an M.C.P. from Penn, up to 12 courses may be credited). After completing course work, each student must pass a preliminary examination in three fields and have his or her dissertation proposal approved.

FACULTY

Eugenie L. Birch, Chair
Jonathan Barnett
Thomas L. Daniels
Gary A. Hack
Amy Hillier
Michael A. Larice
John Landis
Randall Mason
Lynne B. Sagalyn
C. Dana Tomlin
Domenic Vitiello
Vukan R. Vuchic
Susan M. Wachter
Rachel Weinberger
Laura Wolf-Powers
Risseri Yaro

LECTURERS

Harley Bodek
Amando Carbonell
Alan Greenberger
David Hamme
Maya Hook-Smit
Richard Huffman
Ira Harkavy
Rao Kanna
James Nelson Kise
Paul Levy
Peter Miller
Tom Pederson
Shawn Raingh
Pat Rinebergard
Eleanor Sharpe

GRADUATE GROUP FACULTY

Lynne B. Sagalyn, Chair
Jonathan Barnett
Eugenie L. Birch
Yam Cream
Thomas L. Daniels
Gary A. Hack
Amy Hillier
Michael B. Katz
Don F. Kettl
John Landis
Michael A. Larice
Janice F. Madden
Randall F. Mason
Wendell Pritchett
Tony E. Smith
Thomas J. Sugrue
C. Dana Tomlin
Vukan R. Vuchic
Susan M. Wachter
Rachel Weinberger
Laura Wolf-Powers
Domenic Vitiello
Robert Yaro

DEPARTMENT OF CITY AND REGIONAL PLANNING
127 Meyerson Hall
cityplanning@design.upenn.edu

Fine Arts

While the language of visual art is constantly changing, the Department of Fine Arts at the University of Pennsylvania is premised on a broad definition of art that encompasses and embraces multiple traditions and forms of innovation. Motivated and promising artists, working in a range of styles and approaches, immerse themselves in a curriculum that nurtures their technical skills while allowing them the freedom to pursue ideas and develop their personal visions.

Graduate students in Fine Arts work in the disciplines of Painting, Photography, Printmaking, Sculpture, and Combined Media/Newer Technologies in an environment where they are challenged to consider the wider implications of their work and respond to the constantly expanding requirements and responsibilities of artists. Emphasis is placed on the craft and form of making, supported by a rigorous examination of critical and conceptual issues.

Individual studio work is the center of the program of study, and seminars and structured courses serve as a supportive component. Rigorous studio training requires self-discipline and open-mindedness, and students participate in individual critiques, intensive group critiques, and work with faculty and visiting critics on contemporary issues. Seminars based on theory or practice are regularly offered on a variety of forms and topics.

Courses available for graduate credit are offered by the department in undergraduate areas including clay, collage and montage, design, drawing, digital imaging, photography, photo-journalism, printmaking, and sculpture. Elective courses designed for School of Design students in all programs are offered each semester, and include public art, mural painting, and landscape photography. Students may also choose electives from among the broad range of offerings in Arts and Sciences and Wharton.

An extensive Visiting Artist program brings distinguished artists to campus each semester for slide lecture presentations and individual studio critiques. All students participate in an intensive three-day review conducted by all graduate faculty and senior critics at the end of each semester, and a thesis exhibition for all graduating students is held at the end of the final semester of study.

In addition to the M.F.A. program, there is an undergraduate major in fine arts, focusing on the development of a student's sensory awareness, ability to think in response to it, and proficiency in the visualization of thought through the manipulation of materials and processes. Fine Arts courses include sequences in drawing, painting, printmaking, sculpture, design, digital imaging, photography, video, animation, and sfay.

DEPARTMENT OF FINE ARTS
100 Morgan Building
fine-art@design.upenn.edu

FACULTY

John Moore, Chair
Terry Adkins
Laurie Churchman
Susana Viola Jacobson
Joshua Mosley
Jules Schneider
Jackie Tileston
Carrie Mae Weems

SENIOR CRITICS

Denis Alexander
Michael Brennan
Eileen Neff
Nigel Rolfe
Judith Shea
Alan Worth

LECTURERS

Michael Bryant
Paul Buck
Arthur Cicconi
David Cornberg
Colette Copeland
Matt Courtney
Nic Cunniello
Joan Waddagh Curran
Anita Dubinskas
Richard Esbell
Paul Fierlinger
Sharman Fleming
Laura Fraiura
Donald Gensler
Jane Golden
Ryan Greenheck
Jeremy Holmes
Sheila Hyland
Ilse Jacobsohn
Diane Lachman
Sumi Maeshima
Doug Marlanson
Gabriel Martinez
Nancy McDonald
Deirdre Murphy
Matt Neff
Ellen Reynolds
Hans Rudowald
Chinasa Sligh
Emory Van Cleve
Nick Vidnovic
Brent Wahl
Scott White
Shira Walinsky
Scott White

FINE ARTS *We Can't Handle This* / Caroline Santa, gouache on paper, 60 x 96" 2007

Historic Preservation

Historic preservation addresses change responses to the historic environment. At a time when society increasingly realizes the historical and cultural value of that inherited environment and what has been lost through the destruction of buildings, landscapes, and communities, the field of historic preservation has become central to the design, adaptive use, planning, and management of buildings, cities, and regions. By understanding the time dimension in human culture, it identifies history as an integrated component of the continuous change responsible for the material, psychological, and symbolic qualities of our environment. The Graduate Program in Historic Preservation provides an integrated approach for architects, landscape architects, planners, historians, archaeologists, conservators, managers, and other professionals to understand, sustain, and transform the existing environment.

The identification and analysis of cultural places and their historic fabric, the determination of significance and value, and the design of appropriate conservation and management measures require special preparation in history, theory, documentation, technology, and planning. These subjects form the core of the program, which students build upon to define an area of emphasis including building conservation, site management, landscape preservation, preservation planning, and preservation design for those with a previous design degree.

Through coursework and dedicated studios and laboratories at the School of Design as well as through partnerships with other national and international institutions and agencies, students have unparalleled opportunities for study, internships, and sponsored research. Graduates can look forward to careers focused on the design and preservation of the world's cultural heritage including buildings, engineering works, cultural landscapes, archaeological sites, and historic towns and cities.

The Master of Science in Historic Preservation degree requires two years of study and a summer internship, and may be done in conjunction with other degree programs in the School of Design. The Certificate in Historic Preservation also provides an opportunity for specialization for mid-career professionals and for students in other departments of the school and university who wish to pursue the subject in greater depth than their degree program permits. Additionally, the department offers a one-semester Advanced Certificate in Architectural Conservation and Site Management, which provides post-graduate training, focused on advanced research for those who have completed the Master of Science in Historic Preservation degree. Students interested in pursuing the Ph.D. in a preservation topic may apply through the Departments of Architecture and City and Regional Planning.

All students entering the program should possess drafting or drawing proficiency; those electing the emphasis in building conservation should have at least one college-level course in chemistry.

Areas of Emphasis

Site Management

The modern concept of cultural heritage is related to the development of contemporary society, its values and requirements. Using history and preservation as a basis for economic and environmental sustainability and development, training in site management requires knowledge of inventory, documentation, evaluation, public policy, finance, communications, and administration. Such work is normally undertaken in both the public and private sectors by various planning, historical, and regulatory agencies including governmental and non-governmental organizations, and by foundations, not-for-profit corporations, developers, and consulting firms.

Building Conservation

Conservation encompasses the material documentation, analysis, conditions diagnosis, testing, monitoring, and treatment of buildings and sites. It is the technical means by which the whole spectrum of preservation interventions can be ultimately accomplished on a broad range of resources. Work opportunities within this specialization include private and public institutions such as federal and state agencies, and private practice such as architectural and technical consulting firms.

Preservation Planning

No component of the historic environment can be beneficially preserved in isolation. By providing for the establishment of essential continuities while defining strategies for change, planning is a fundamental component of preservation just as preservation is a means to planning. This entails expertise in policy law, and economics as well as in history and physical planning. Such work is normally undertaken in both the public and private sectors by various planning, historical, and regulatory agencies including governmental and non-governmental organizations, and by foundations, non-profit corporations, developers, and consulting firms.

Landscape Preservation

The preservation and management of cultural and historic landscapes require complex training in landscape history, ethnography, ecology, regional planning, and the materiality of the built and natural environment. As the physical result of human interaction with the natural world, cultural landscapes as common and designed places require preservation strategies that incorporate sensitive design with responsible conservation and management.

Preservation Design

Increasingly, many architectural problems require design professionals with special training in the creative and sensitive modification of existing structures and sites. For architects and designers who choose to broaden their professional expertise by preparing for such specialized practice, detailed knowledge of history and preservation theory and technology is essential for good design. This emphasis is available only to joint architecture and urban design degree/certificate candidates and individuals with design backgrounds.

HISTORIC PRESERVATION / Mesa Verde, Colorado / 2006

FACULTY
Frank G. Matero, Chair
David G. De Long
Randall Mason
John Milner

LECTURERS
Jake Barrow
A. Elena Charola
Alberto de Tagle
Joseph Elliott
Clark Erickson
Lindsay Falck
Michael Henry
John Hinchman
David Hollenberg
Andrew Lins
Patrick McGovern
Melissa Meighan
Judith Peters
Donovan Rypkema
Mario Santana
Rosert St. George
William Whitaker
Gail Caskey Winkler

DEPARTMENT OF
HISTORIC PRESERVATION
115 Meyerson Hall
hpmdman@design.upenn.edu

Landscape Architecture

Long recognized around the world for its pioneering contributions to landscape and ecological design, the Department of Landscape Architecture continues to develop innovative practices that help to shape and advance the field. Committed to the education of future landscape architects, the department's emphasis upon the design of projects is informed by a thorough understanding of the history of ideas, ecology, techniques of construction, visualization and new media, and contemporary urbanism. The work of faculty and students reflects the ambitious character of the department, and continues to be deeply influential internationally. Indeed, rapidly changing social and cultural conditions around the world require that future professionals be able to respond with new forms, new methods of practice and new technologies, and it is to this global future that we look.

The diversity of the profession of landscape architecture is well represented at Penn. Students are introduced to the varied scales of practice (from gardens and small urban parks to larger territories such as city sectors, brownfields, and regional watersheds) and to its broad scope (from formal and materialesses to techniques of reclamation, management, and communication). These concerns are fully explored in design studios, where students are encouraged to expand their creativity while learning the necessary conceptual, visual, and technical skills to properly develop their work. Seminars and workshops in history and theory, technology (ecology, horticulture, earthwork, construction, and project management), and visual and digital media further complement this work. Advanced, speculative, and/or independent work takes place in the final year of study, where students may choose from a wide array of offerings across PennDesign.

The internationally distinguished faculty has expertise in design, urbanism, representation, technology, and history and theory. In addition, leading practitioners and theorists around the world are invited to lecture, conduct seminars, or teach advanced studios. There are also strong links to other departments in the school, particularly the Department of Architecture, and joint studios with architecture, planning, and preservation are offered regularly.

The Department offers two primary courses of study leading to a professionally accredited Master of Landscape Architecture (M.L.A). The first professional degree program is three years in length and is designed for students with an undergraduate degree in a field other than landscape architecture or architecture. The second professional degree is two years in length and is designed for those who already hold an accredited professional bachelor degree in landscape architecture or architecture. Students may be admitted with advanced standing into either of these programs depending upon their respective backgrounds. Dual degree programs with architecture, city planning, historic preservation or fine arts are also available. Landscape architecture degrees may be combined with certificate programs in historic preservation, urban design, or real estate design and development. The department also offers a Certificate in Landscape Studies designed for students who may wish to augment or focus their prior work through research into landscape topics.

The Master of Landscape Architecture Degree Program is fully accredited by the ASLA.

DEPARTMENT OF
LANDSCAPE ARCHITECTURE
110 Meyerson Hall
larp@design.upenn.edu

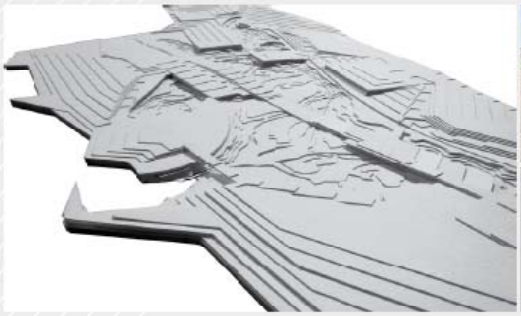
FACULTY
James Corner, Chair
Anita Berrizbeitia
John Dixon Hunt
H. Peter Laiz
Amanda Mathur
Karen M'Closkey
Cora L. Olgyay
Laurie D. Olin
Margie Ruddick
Lucinda R. Sanders
C. Dana Tomlin

LECTURERS
Sierra Bainbridge
Julie Bleckman
Paolo Riorp
Dilip da Cunha
Joseph Disponzio
Lindsay Falck
David Gouverneur
Rachel Johnston
Rebecca Keimer
Keith Kaseman
Richard Kennedy
Trevor Lee
Sandro Marpillero
Jar McFarlan
Dennis McGlade
Paul Meyer
Valerio Morabito
Jennifer Orr
Linda Pollak
Chris Reed
David Robertson
Rodney Robinson
Cristen Sosler
Sarah Weidner
Sarah Wiley
William Young
Hong Zhou

LANDSCAPE ARCHITECTURE / Sections, Perspective / Michael Bradford Goetz / 2006

HISTORIC PRESERVATION / *Preservation Praxis, Capilla del Santo Cristo de la Salud, San Juan, Puerto Rico* / 2004

LANDSCAPE ARCHITECTURE / *Interpretive Garden Perspective* / Judy Venconsky / 2006



LANDSCAPE ARCHITECTURE / *Model* / Angela Chen-Mei Soong / 2006

(top) LANDSCAPE ARCHITECTURE / *Terrace Garden Perspective* / Hsin Ming Juang / 2007; (above) ARCHITECTURE / *Exercise One: Card Structure Generated from a Natural System* / Jae Young Lee, Erica Sweeny, 1st Year / 2007

HISTORIC PRESERVATION / *Trinity Church, Pittsburgh, Pennsylvania* / 2007

Certificate Programs

Ecological Architecture Certificate
Director William W. Braham

Available to students enrolled in the Masters of Architecture or other PennDesign degree programs as well as to working practitioners, the certificate in ecological architecture provides an opportunity to gain expertise in ecological design. Its goal is to help students develop an understanding of the dynamic interaction between the natural and built environments, and to introduce performance based techniques for operating in that interaction. Ecological design can involve many different kinds and scales of practice, from landscapes to products, and draws on many fields of expertise. In its broadest form it is open, contingent, historical (non-reversible), and organic to its environments.

The certificate introduces students to the range of ecological approaches in two required courses, and then allows them to pursue different emphases through a selection of elective courses. It is an extension of the basic offerings in environmental concepts and systems required for the Masters of Architecture, with the addition of different ecological offerings from other departments and schools.

Certificate in Urban Redevelopment
Director Eugenie L. Birch

This certificate is aimed at two types of students: working practitioners needing basic training in urban redevelopment or updating about current practices; and graduate students in Penn's schools interested in adding knowledge about urban redevelopment practices to their professional qualifications. The certificate requires completion of five course units selected from among an approved list of classes. School of Design students may complete this certificate within the time-span of their chosen degrees. Candidates for the Master of City Planning degree do not qualify for the certificate but are eligible to take certificate courses as arranged with their advisors.

The certificate requires a one course-unit finance-based course, a one course-unit redevelopment process course and three course-units in electives chosen in consultation with the program director.

Certificate in Urban Design
Director: Jonathan Barnett

Urban design at PennDesign is interdisciplinary. The curriculum for the Certificate in UrbanDesign includes case studies, theory, studio, and courses in real estate or law. Studio courses investigate a real problem that exemplifies important current city design issues either in the U.S. or in an international setting. The studio also includes instruction in basic urban design techniques. With careful planning, the Certificate can be completed simultaneously with the degree programs offered by PennDesign in City Planning, Landscape Architecture, or Architecture.

Those interested in completing the Certificate in UrbanDesign can apply when they make their application for one of the PennDesign degree programs, or can apply for admission to the Certificate program after admission to a degree program. Applications for the Certificate include a portfolio demonstrating previous design instruction and experience or examples of a report or other professional work. Completing the certificate requires the 5 course units of its core curriculum. Mid-career students with a prior professional degree in planning, landscape architecture, or architecture may also be admitted to the Certificate Program, and may complete it as either full or part-time students.

Certificate in Real Estate Design and Development
Director: Witold Rybczynski

A thorough understanding of financial, legal, and design issues in real estate development allows the architect, landscape architect, city planner, or historic preservationist to offers more comprehensive range of services and to play a more effective role in urban and suburban development projects. To meet a rising demand among design professionals for real estate expertise, the School of Design, in cooperation with the real estate department of the Wharton School, has established a specialized course of study leading to a PennDesign Certificate in Real Estate Design and Development. Since 1998, more than sixty students have completed the certificate.

Master's students enrolled in the 2- and 3-year masters programs in Architecture, Historic Preservation, Landscape Architecture, and City and Regional Planning are eligible to enter the Real Estate Design and Development program. Students must apply and be formally accepted (deadline for applications is November 1). The number of places in the program is limited. Students receive a Certificate in Real Estate Design and Development by completing a program of 5 required courses, taken in both the School of Design and the Wharton School.

Certificate in Historic Preservation
Director: Frank G. Matero

The Certificate in Historic Preservation provides an opportunity for students in the departments of Architecture, Landscape Architecture and City and Regional Planning to gain expertise in historic preservation while completing requirements for their professional degrees. The Certificate program also offers practicing professionals the opportunity to pursue specialization training in historic preservation within one semester full-time. For all students, the requirements must be completed within four years of admission. Five course units in Historic Preservation, including HSPV 660-301 Theories of Historic Preservation, are selected in consultation with the faculty to develop an area of professional focus.

Additionally, the department offers a one-semester Advanced Certificate in Architectural Conservation and Site Management which provides postgraduate training focused on research or praxis for those who have completed the Master of Science in Historic Preservation. The Advanced Certificate allows graduates the unique experience of directed research and field work at home or abroad under direct professional mentorship.

Certificate in Landscape Studies
Director: James Corner

The certificate program in landscape studies focuses upon contemporary theories and practices of landscape architecture, and provides various opportunities for advanced research, leading-edge discovery, and discussion across the professional field. The program is available to all students already enrolled in PennDesign, but applications from mid-career practitioners, other professionals, or scholars who seek some in-depth knowledge of current landscape architecture (e.g. architects, environmental journalists, landscape historians) is desirable and encouraged. Upon admission, each student must discuss and obtain approval for their proposed course of study. The Certificate is awarded upon satisfactory completion of five approved courses, which may be selected from a wide range of offerings.

Certificate in Graphic Design
Director: Laurie Churchman

The Certificate in Graphic Design provides students with an opportunity to explore visual communication concepts. Courses in fundamentals, typography, theory web, and graphic design practice provide an overview of core design and communication concepts that can offer opportunity for further study as well as enhance students' design thinking in preparation for multi-disciplinary collaborations. Applicants to the Graphic Design certificate will be required to submit a portfolio and have a personal interview. The portfolio should have a maximum of 15 examples and may including slides, digital images, printed samples, books, or weblinks and should be presented at the interview.

Certificate in Time-Based and Interactive Media
Director: Joshua Mosley

The Certificate in Time-Based and Interactive Media provides students with an opportunity to learn new skills while completing their master degree at Penn Design. The curriculum also enables outside applicants to engage in new technologies and skills that could be incorporated into their existing practice, or extend their knowledge to improve their career opportunities. A certificate may be completed within a two semester period.

Those interested in completing the Certificate in Time-Based and Interactive Media can apply directly to the program or at the time of application for other PennDesign degree programs. Matriculated PennDesign students can apply during their first semester of study.

Dual Degree Programs

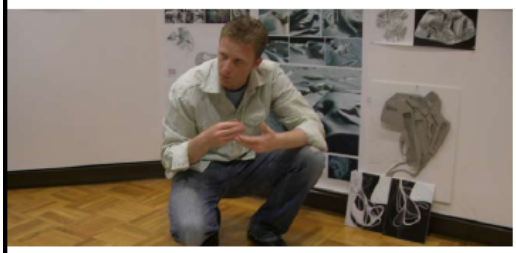
The School of Design places great emphasis on interdisciplinarity and offers a series of both dual degree options and certificates to enable students to take their creative and intellectual study and research across conventional departmental boundaries. Students may pursue two Master's degrees concurrently by participating in a dual degree program. Applicants for graduate study may apply to more than one program, and if admitted, work with the Chairs of the respective departments to agree upon the sequence and timing of courses to be taken. Alternatively, students who have been admitted to one program may apply for admission to a second program after beginning their studies. Students who expect to receive two degrees must meet the requirements for each degree. Pursuing two degrees will generally require less time than studying for each separately but the precise length of the combined program will depend upon past preparation, course substitutions, combined studios, and other factors.

Dual degrees offered within PennDesign include:

- Master of Architecture/Master of City Planning
- Master of Architecture/Master of Science in Historic Preservation
- Master of Architecture/Master of Landscape Architecture
- Master of City Planning/Master of Science in Historic Preservation
- Master of City Planning/Master of Landscape Architecture
- Master of Fine Arts/Master of Landscape Architecture
- Master of Science in Historic Preservation/Master of Landscape Architecture

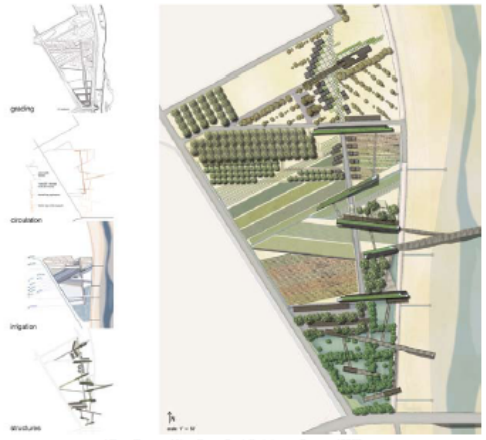
Dual Degrees offered with other Schools and Programs are:

- Master of City Planning/Master of Social Work
- Master of City Planning/Juris Doctor
- Master of City Planning/Master of Urban Spatial Analytics
- Master of Architecture, Master of City Planning, Master of Science in Historic Preservation or Master of Landscape Architecture/Master of Business Administration



FINE ARTS / *Untitled (detail)* / Shanjana Mahmud, mixed media on paper / 2007

ARCHITECTURE / *FarmFORMations: Emergent Organizations for Architecture* / Wendy Lam, 3rd Year / 2006



LANDSCAPE ARCHITECTURE / *Plans, Diagrams* / Alexa Bosse, Sarah Peck, Lauren Sweeney / 2007

PennDesign Resources

PennDesign Computing Resources
The studios of PennDesign are fully networked, allowing students to work using digital media at their desks. PennDesign students are encouraged to purchase computers, and in most programs this is required. The computing resources of PennDesign are designed to assure that all students and faculty members have a rich computational environment available to them at their desktops, or in laboratories.

Every PennDesign student is assigned a network account that allows access to state-of-the-art software, printers, electronic mail, the Internet, and World Wide Web. Three computer labs and a variety of input and output devices, including large-format plotters, color printers, projection units, slide, and flatbed scanners, are available to students 24 hours a day, seven days a week.

Applications available include computer-aided design, digital image manipulation and processing, geographic information systems, graphic design, multimedia, three dimensional modeling, rendering and animation, and urban simulation modeling in addition to various data processing and electronic communication.

The computing staff is dedicated to providing support to students, faculty, and staff, maintaining a multi-platform environment that supports the course work and research activities of PennDesign.

Fabrication Laboratory
The School of Design Fab Lab is a woodworking and metalworking facility serving as a practical laboratory extension of classroom theory. The lab is equipped for all phases of woodworking, metalworking, and machining, as well as digital CNC routing and laser cutting. The Lab is available to all School of Design students and to all students enrolled inancillary School of Design courses upon completion of a Lab Safety Course.

Libraries
The University of Pennsylvania Library is a system of seventeen campus libraries. The Library's web site at www.library.upenn.edu provides information about services and collections and links to all digital library resources. The Anne and Jerome Fisher Fine Arts Library offers collections in architecture, city and regional planning, history of art, landscape architecture, fine arts, historic preservation, and urban design. Material on the arts of Islam, South Asia, and East Asia supplement holdings in the Van Pelt Library and the Museum Library. The Fisher Fine Arts Library, a circulating collection, includes approximately 150,000 volumes and 940 current serial subscriptions. One of its constituent parts, the Perkins Architectural Collection, contains more than 2,000 key titles in the history of architecture from the sixteenth century forward.

The Fine Arts Image Collection (Slide Collection) is part of the Fine Arts Library and provides visual resources in the areas of landscape architecture, city planning, architecture, sculpture, painting, and minor arts to the Department of Art History, the School of Design, and the University of Pennsylvania community. Resources include 500,000 slides and 100,000 digital images, available online.

Fine Arts Librarian: William B. Keller
215-898-8325
wkeller@pobox.upenn.edu

University Career Services
The University Career Services Office offers advising in areas such as career service is open to current students and alumni. Programs on career opportunities sponsored throughout the year, including workshops and career days (which involve the participation of local employers). There is a counselor who works specifically with the students from PennDesign.

Career Counselor: Julie Vick
215-898-7531

Institute of Contemporary Art
The Institute of Contemporary Art (ICA), located on the University of Pennsylvania campus at 36th and Sansom Streets, is a non-collecting exhibition facility dedicated to presenting the art of our time. The building was designed by Adèle Naudé Santos in 1963 and provides more than 10,000 square feet of space with soaring two-story galleries, a fully equipped education center, a roof-top garden, and archival library. The mission of the Institute for Contemporary Art is to develop, affirm, and challenge the public's understanding of contemporary art by providing a forum for innovative art of the present and recent past through pioneering exhibitions, scholarships, publications, and educational programs. The ICA encourages public analysis of its art exhibitions through lectures, films, and performances and members of the University community are always welcome.

Director: Claudia Gould
215-898-5911

Arthur Ross Gallery
The Arthur Ross Gallery, housed in the historic landmark library building designed by Frank Furness, presents at least four major exhibitions annually, including objects from the University's collections, other public and private collections worldwide, and traveling exhibitions. Through its exhibition program, lectures, tours, children's

programs, and special events, the gallery relates the objects displayed to the broader issues of art and the humanities.

Director/Curator: Lilya Wissgrad
215-898-2083

Morris Arboretum
The Morris Arboretum is an educational institution that promotes an understanding of the important relationships between plants and people. Founded in 1887 as the private estate of John and Lydia Morris, brother and sister, the Arboretum today is an interdisciplinary center that integrates art, science, and the humanities. It is the official arboretum of the Commonwealth of Pennsylvania, is listed on the National Register of Historic Places, and is accredited by the American Association of Museums. The Arboretum conducts three major activities: horticultural display; public and professional education; and botanical and horticultural research. For more information, visit www.businessservices.upenn.edu/arboretum/.

Director: Paul W. Meyer
215-247-5777

Research@PennDesign

Architectural Archives
Among the most significant collections of design records in the world, the Architectural Archives of the University of Pennsylvania collects, preserves, and interprets the works of over 400 designers from the 19th century to the present. The Archives gained its international reputation initially through the Louis I. Kahn Collection whose resources include over 35,000 drawings, 100 models, 10,000 photographs, and 120 boxes of papers. Major collections include the archives of Edmund N. Bacon, Paul Philippe Cret, Lawrence Halprin, G. Robert Lafferdale, Ian L. McHarg, Mitchell/Giurgola, Anderson & Noemi Raymond, as well as the recently acquired Robert Venturi & Denise Scott Brown Collection.

The research collections in the Archives are available to faculty, students, and scholars for independent study as well as in support teaching in the University of Pennsylvania and other institutions. The archival facility on the lower level of the Fisher Fine Arts Library houses the Kroe Gallery for exhibition and a specialized library, reading room, and seminar room, in addition to facilities for storage and processing.

Collections Manager: William Whitaker
215-898-8505

Architectural Conservation Laboratory
The Architectural Conservation Laboratory and Research Center of the Graduate Program in Historic Preservation is devoted to training and research in the conservation of the built environment. This specialized facility provides a unique intellectual environment for those pursuing studies in architectural conservation and the history of building technology.

The ACL encourages cross disciplinary collaboration on contemporary issues related to the conservation of culturally significant buildings, monuments, and sites throughout the world. Through grants and sponsored projects, the faculty and staff of the Historic Preservation Program, in collaboration with other University centers such as the Laboratory for Research on the Structure of Matter and the Cartographic Modeling Laboratory, conduct a full agenda of research dedicated to field survey, recording, analysis of building materials, and treatment evaluation of historic structures. The ACL has cooperative agreements with many private and public agencies and educational institutions in the U.S. and abroad which provide opportunities for independent study, thesis work, and sponsored research for students from Penn and guest institutions.

Director: Frank G. Matero

Cartographic Modeling Lab
The Cartographic Modeling Lab specializes in the use of geographic information systems (GIS) and spatial analysis methods. The CML collaborates with researchers, policy makers and community based organizations on a variety of GIS projects with a special focus on urban and central policy analysis in Philadelphia.

T.C. Chan Center for Building Simulation and Energy Studies
The environmental issues faced by today's building industry provide a unique opportunity to address and affect real change. The mission of the T.C. Chan Center is to develop new knowledge, analytical tools, processes, simulation techniques, technologies and programs of continuing education for professionals involved in building energy and systems. Our goal is to create healthier, productive, energy efficient strategies for high performance buildings and sustain(able) environments. The center's associates' professional practices and corporate members form a global consortium which represents the leading firms, corporation and innovators from various sectors of the building industry.

The Center engages in the creation (research), application (consulting) and dissemination (communication) of knowledge. Collaborative research is related to the development of basic knowledge, technologies and processes. Practical applications range from the building to the urban scale. Research outcomes include patents, publications and proprietary information.

Non-Linear Systems Organization
The Non-Linear Systems Organization (N.SO) is a PennDesign research group directed by internationally renowned engineer and designer, Cecil Balmond. Its mission is to explore ways in which architecture can demonstrate, test and apply insights and theories from mathematics and the sciences--non-linear, algorithmic and complex--in the design of material structures across an open-ended range of scales, materials and design disciplines. By transferring theoretical scientific knowledge into the applied design arts, it seeks to expand the horizons of design and, at the same time, promote a broader appreciation of these theories by the general public.

The NSO conducts think tanks and design workshops that bring together researchers in the sciences with architects and other design professionals to identify scientific models that could be developed into new design techniques and processes. It offers research fellowships to support work that advances the mission of the organization. The work of the NSO is experimental and treats the activity of design itself as a form of research. The NSO seeks to produce new organizations of matter and life that possess extraordinary beauty, diversity and versatility. By exposing scientists and theorists to the opportunities of applied design, the NSO also seeks to stimulate the further development of science.

Penn Institute for Urban Research
The Penn Institute for Urban Research is dedicated to fostering increased understanding of cities and developing new knowledge base that will be vital in charting the course of local national and international urbanization. By providing an umbrella structure for the urban focused scholarship, research and civic engagement within Penn's twelve schools, the Penn IUR provides the synergy needed to address urban challenges in the 21st century. As a campus-wide institute, Penn IUR sponsors a number of initiatives, stimulates research, provides opportunities for collaborative instruction and engages with the world of practitioners and policymakers.

PennPraxis
Penn Praxis was created by the School of Design to further the mission of the school in the fields of architecture, planning, landscape architecture, community development, public art and historic preservation. Penn Praxis is a vehicle for carrying out practical or applied projects for external clients under the direction of PennDesign faculty. Modeled in part on the Community Design Collaborative centers at other institutions, on legal services organizations in law schools, and the practice entities in medical schools, Penn Praxis serves to provide opportunities for student and faculty education and development, strengthen community ties, and provide service to the community.

Admissions

OFFICE OF ADMISSIONS
University of Pennsylvania
School of Design
110 Meyerson Hall
Philadelphia, PA 19104-6311
admissions@design.upenn.edu
www.design.upenn.edu/admissions
215-898-6520

Applicant Requirements
Applicants to the School of Design must submit an on-line application, a non-refundable application fee of $75, personal statement, three letters of recommendation, and official transcripts from all undergraduate institutions attended for credit. Official scores of the general Graduate Record Examination (GRE) are required by all programs except the MFA. A bachelor's degree from an accredited college or university is required of all students before they enter our graduate programs.

All Architecture, Fine Arts and Landscape Architecture programs require portfolios. Specific portfolio guidelines can be found at www.design.upenn.edu/admissions. Applicants to the Certificate in Urban Design must submit either a portfolio or examples of a report or other professional work. The Ph.D. programs and the M.S. in Architecture program require a sample (e.g. essay, research report) of written work in English on the subject of the applicant's field of specialization in addition to the portfolio. Applicants to the M.Arch. I Post-Professional degree must submit two writing samples and a description of their computing skills and software proficiency in addition to the portfolio.

We prefer that you submit your on-line application prior to sending us your supporting material. Materials submitted in support of an application for admission, except for the portfolio, become the property of PennDesign and cannot be returned to the applicant nor will the Office of Admissions forward copies of them to other institutions. Although portfolios are returned to applicants who submit stamped, self-addressed envelopes, PennDesign will not be responsible for lost or damaged portfolios.

Deadlines
Applications must be submitted and supporting materials must be received by the Office of Admissions no later than January 2 for the M.S. in Architecture and all Ph.D. programs, January 15 for the Master of Architecture programs, and February 1 for all other programs. These are not postmark deadlines. Notification of admission is sent out at the end of March.

International Applicants
Applicants whose native language is not English and whose undergraduate training has not been conducted in the English language must submit official TOEFL or IELTS scores. Candidates admitted to the School of Design may be required to successfully complete an English Language Program prior to matriculation. They will be notified of this condition in their letter of admission.

Prerequisites: Master of Architecture Professional Degree Program
To be admitted without conditions to the three-year program, applicants are required to complete at least one college-level course each of physics (must include mechanics, heat, light, sound, and electricity), calculus; history of Western architecture from ancient Egyptian through modern period, and a descriptive drawing course. In addition, they must complete a minimum of two semesters of college-level design studio courses. Candidates admitted with deficiencies in any of these prerequisites must fulfill them before matriculation.

Prerequisites: Master of Science in Historic Preservation
All students entering the program should possess drafting proficiency; those electing the concentration in building and material conservation should have at least one college-level course in chemistry.

Architecture Summer Preparatory Studio
Candidates who have substantially fulfilled the requirements for admission to the Master of Architecture program but who require additional design experience may be required to attend an intensive summer design studio prior to matriculation. This studio, held for seven weeks during the summer, introduces students to basic three dimensional design studies and simple architectural studio investigations. The program for such students is three and one-half years (7 semesters) in length.

Advanced Standing
Master of Architecture Professional Degree applicants may qualify for up to one year of advanced standing if they have a Bachelor of Arts or Bachelor of Science in Architecture from a four-plus-two professional program or have completed at least one year of study in an accredited Master of Architecture program. In addition, they must have completed the equivalent of the first year's technology, theory, and studio courses.

Deferral of Admission
Under extenuating circumstances, deferral of admission for a period of one year may be granted to candidates who have been admitted but are unable to enroll. Requests in writing must be addressed to the Chair of the department to which the candidate has been accepted. This written request must be accompanied by the non-refundable tuition deposit. The Master of Architecture and the Master of Fine Arts programs do not permit deferrals.

Reapplication for Admission
Former applicants or students who wish to apply within two years of their original application must submit a new application form and fee, a new portfolio (if required by their program), transcript(s) of any additional coursework taken since the original application, and a letter requesting that their file be re-activated. They do not need to resubmit test scores, letters of recommendation, or transcripts. If an applicant wishes to reapply for admission after two years, all forms and documentation must be resubmitted.

Acceptance Deposit
When an applicant accepts admission to PennDesign, she or he is required to pay a deposit of $500 which shall be credited toward the first semester's tuition charges. In the event the candidate fails to matriculate, this deposit is not refundable.

Tuition and Fees
The tuition and general fee for full-time graduate students in the School of Design was $35,640 for the 2007-2008 academic year. The Trustees of the University of Pennsylvania reserve the right to increase tuition and fees and otherwise to amend the regulations concerning tuition, fees, and method of payment at any time and to make such changes applicable to students in the University at that time as well as to new students.

Housing
On-Campus Housing
http://www.business-services.upenn.edu/housing/index.html

On-campus housing is available in graduate residences, which provide one and two-bedroom furnished apartments and single rooms. Housing is available to graduate students who wish to bring others with them, including children. Graduate students residing in the apartments have the option to live with others.

www.upenn/edu/housing

Off-Campus Living
http://www.business-services.upenn.edu/offcampusliving/

Many graduate students choose the option of living off-campus. For assistance in locating off-campus housing, the University has an Off-Campus Living Office. The office maintains a listing service through which information on available rental units is made accessible. In addition, the office provides information and service in the areas of lease reviews, repairs, safety audits, and other housing related issues.

International House
www.housephillyorg

University students have the opportunity to live in an international atmosphere by becoming residents of International House, a coeducational residence and activity center for graduate international and American students, post-graduate trainees, researchers, and other academically related persons from all over the world.

Financial Aid

The School of Design works closely with the University's Office of Student Financial Services to provide its students with assistance in planning for and securing adequate financing for graduate school. Students who are U.S. citizens or permanent residents and who have demonstrated need should be able to meet all expenses for the academic year through a combination of scholarships, loans, work-study, parental contributions, summer earnings, and other resources. The need of a student is determined by assessing all possible resources including the student's own resources and those of his or her spouse, if any. From these resources, the student's estimated expenses are deducted; the difference becomes the student's "need." International students, though not eligible for federal loans and work-study, may apply for need-based PennDesign grants.

In order to receive scholarship or fellowship aid from the School of Design, students must be enrolled full time and maintain a fully paid balance at the University of Pennsylvania, including charges for tuition, general fee, student health, rent, and Student Telephone Services. Awards are made for one academic year only but normally will be continued if the University's financial resources permit and if the student has a good academic record and is still in financial need.

APPLYING FOR FINANCIAL AID

U.S. Citizens and Permanent Residents

Students applying for financial aid should complete and submit the Free Application for Federal Student Aid (FAFSA) form as soon as possible after January 1. The FAFSA form is used to determine eligibility for Federal loans, work-study, and need-based PennDesign grants. The on-line application is available at www.fafsa.edgov/. Continuing students must submit the FAFSA each year they are enrolled in the School of Design.

International Students

International students applying for financial aid should submit the International Student Financial Aid Application to the Office of Admissions. This form is available to download at www.sfs.upenn.edu/forms-apps/forms-prohtm. For priority consideration completed forms should be submitted to PennDesign by March 1. International students are eligible for PennDesign grants, including university scholarships, endowment funds, and teaching assistantships. These generally cover only a portion of tuition.

PENNDESIGN GRANTS AND SCHOLARSHIPS

Need-Based Grants

The Dean of the School awards School of Design grants to eligible financial aid candidates. These grants are awarded based on need, as determined through the application procedures described above.

Departmental Scholarships

The Dean of the School awards merit-based scholarships to students based upon the recommendation of the Department and Program Chairs and their Financial Aid Committees. These scholarships are not applied for; rather, they are granted at the discretion of the Department.

Ph.D. Programs

Students enrolled in the Ph.D. programs are expected to be either fully supported by outside sources or must be fully funded by their Departments. Full funding in the form of a University Fellowship is available to a very limited number of entering students.

Loan Programs

About 60% of all PennDesign students who are U.S. citizens or permanent residents finance part of their education through educational loan programs. The Federal Stafford Loan and the Federal Perkins Loan are need-based loans guaranteed either by the Federal Government or by a state guarantee agency. To apply for the loans, students should file the FAFSA form. In addition to the Federal loans, students may take out alternative educational loans. For more information about student loans, go to www.sfs.upenn.edu.

Federal Work-Study

Federal Work-Study grants are available to students who demonstrate substantial need as determined by the FAFSA and who are U.S. citizens or permanent residents. Students are able to select from a variety of positions located throughout the entire University of Pennsylvania campus, and approved off-campus nonprofit or governmental organizations.

Teaching and Research Assistantships

Each year, teaching and research assistantships are offered in the fields of Architecture, City Planning, Fine Arts, Historic Preservation, and Landscape Architecture. These assistantships are awarded on the basis of individual merit and the needs of the school. They may be awarded either to students presently enrolled or to new students coming to the school for the first time.

Resident Counselors

The Department of Housing and Conference Services actively recruits single and married graduate students who can make positive contributions to undergraduate life. It seeks men and women who are at ease with a variety of life styles and who, as members of the resident community, will be interested and involved in the changing undergraduate environment and experience. Remuneration includes a furnished room and, in some cases, a cash stipend.

The Alumni Tradition

The international community of PennDesign alumni numbers more than 9,000 designers, artists, planners, and preservationists active at all levels of their professions. The School is known for its distinguished alumni in the arts, in practice, and in academia, who teach in graduate and undergraduate programs across the nation and around the world.

The PennDesign Alumni Association (PDAA) represents the interests of this diverse body and serves as a liaison between the alumni community and the students and faculty at the School. PDAA fosters formal and informal student-alumni exchanges during the academic year, sponsors Philadelphia-area alumni events, and is developing regional alumni programs to encourage professional alliances among alumni around the world.

The Office of Development and Alumni Relations at PennDesign connects the School and its alumni. Through publication of regular print and email newsletters, and coordination of alumni events throughout the year, Alumni Relations celebrates the attainments of PennDesign graduates, and links their needs and interests with those of the School. By creating opportunities for lifelong involvement and promoting each other's professional and academic achievements, Alumni Relations helps maintain and extend a nearly 140-year tradition of excellence and ensures the School's continued involvement in urban, national, and global affairs.

This publication was updated as of August 2007. The School of Design reserves the right to revise any information herein at its discretion and without prior notice.

Non-Discrimination Policy Statement

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability, or status as a Vietnam Era Veteran or disabled veteran in the administration of educational policies, programs or activities; admissions policies; scholarship and loan awards; athletic, or other University administered programs or employment. Questions or complaints regarding this policy should be directed to: Executive Director, Office of Affirmative Action and Equal Opportunity Programs, 3600 Chestnut Street, Sansom Place East, Suite 228, Philadelphia, PA 19104-6106 or 215-898-6993 (Voice) or 215-898-7803 (TDD).

Notice of Availability of Crime Information

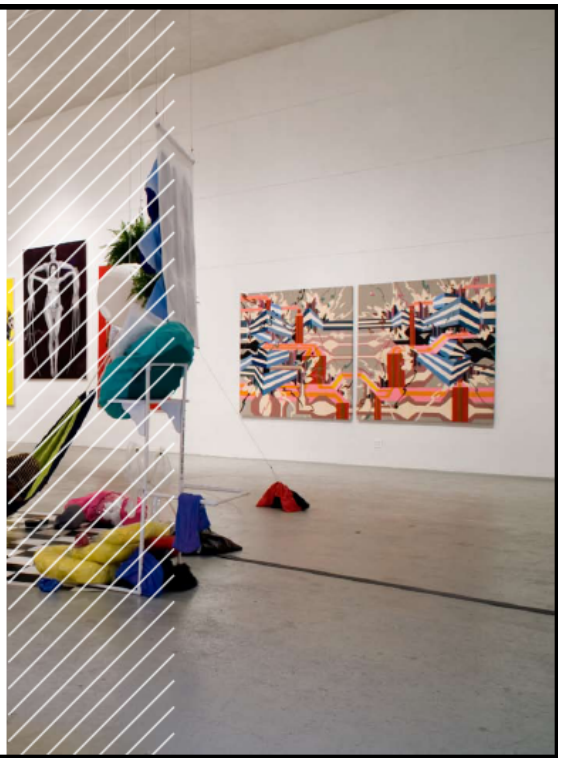
The federal Crime Awareness and Campus Security Act, as amended, requires colleges and universities to provide information related to security policies and procedures and specific statistics for criminal incidents, arrests, and disciplinary referrals to students and employees, and to make the information and statistics available to prospective students and employees upon request.

In addition, the Pennsylvania College and University Security and Information Act requires Pennsylvania colleges and universities to provide information related to security policies and procedures to students, employees and applicants; to provide certain crime statistics to students and employees, and to make those statistics available to applicants and prospective employees upon request. To review the University's most recent annual report containing this information, please go to http://www.upenn.edu/almanac/crimes-index.html. You may request a paper copy of the report by calling the Division of Public Safety at 215-898-4482.

Contact Us

SCHOOL OF DESIGN
110 Meyerson Hall
240 South 34th Street
University of Pennsylvania
Philadelphia, PA 19104-6311
admissions@design.upenn.edu
215-898-6520

For directions to the Penn campus, please visit www.design.upenn.edu.



Appendix 1 Library Collection: Units Held and Budget

TYPES	NO. OF VOLS.	BUDGET FY08	BUDGET FY09	BUDGET FY10
Books classed in LC-NA or Dewey 720	90,000	$25,000	$29,000	$30,000
Other Books	110,000	$334,392	$298,406	$269,146*
Periodical Subscriptions	150	$85, 073	$81,503	$85,000
Other Serial Titles	850	NA	NA	NA
Microfilm Reels	1,100	NA	NA	NA
Microfiche	40,000	NA	NA	NA
Slides	500,000	NA	NA	NA
Videos	400**			
CD ROMS	50 as separate; budgeted from book account			
Photo CDs	0	NA	NA	NA
Digital Image Files	1,000,000 held or licensed; budgeted from book and serials accounts			
Other Electronic Pubs.	Substantial web and repository content			
Drawings	Administered by the Architectural Archives of the University of Pennsylvania, Penn School of Design			
Photographs	84,000	NA	NA	NA
Other	600 printed maps and prints			

*Additional funds are available for discretionary use for acquisition of rare publications in architecture (average $50,000-$75,000 annually)

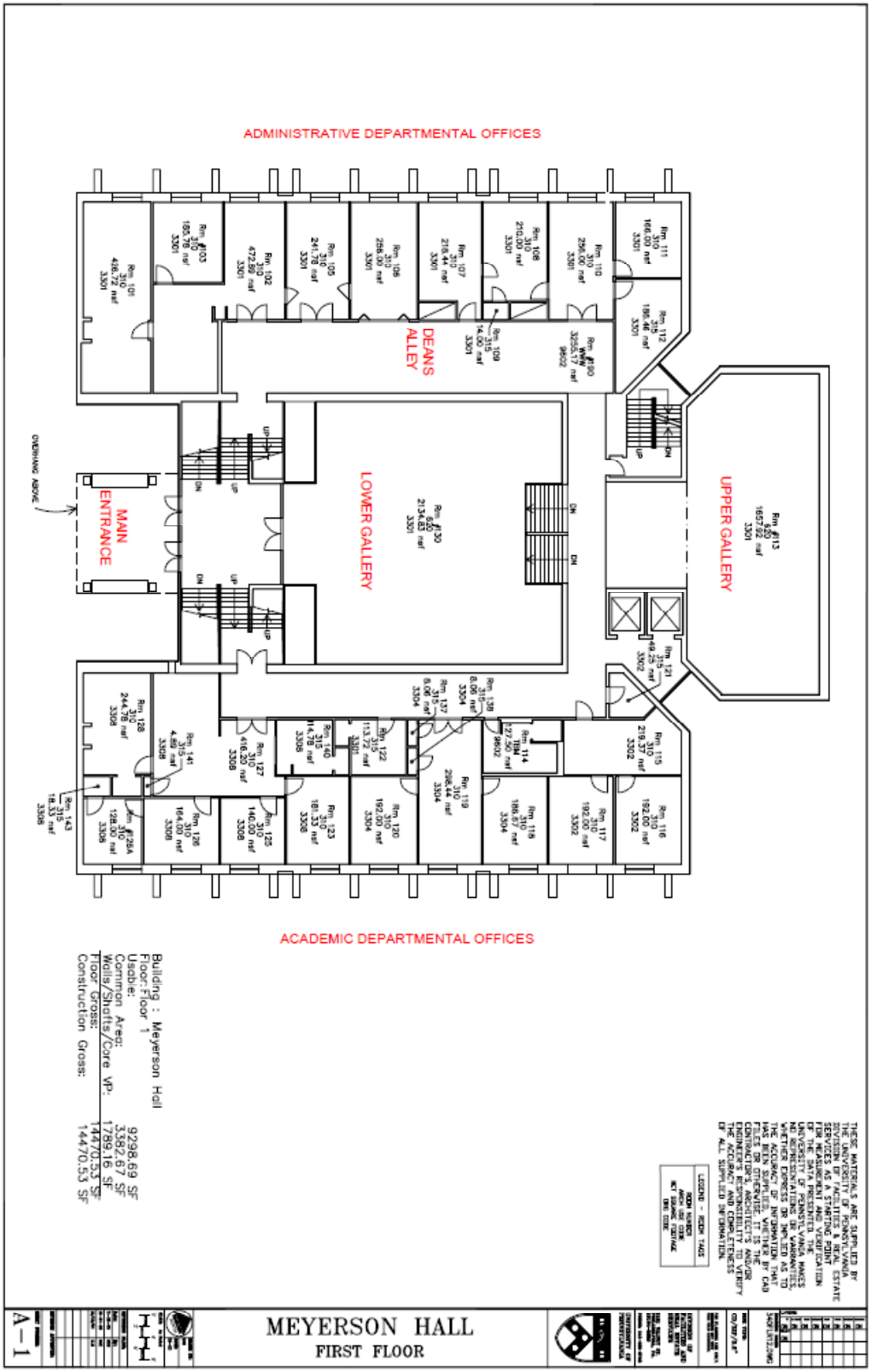
**Budgeted from book account

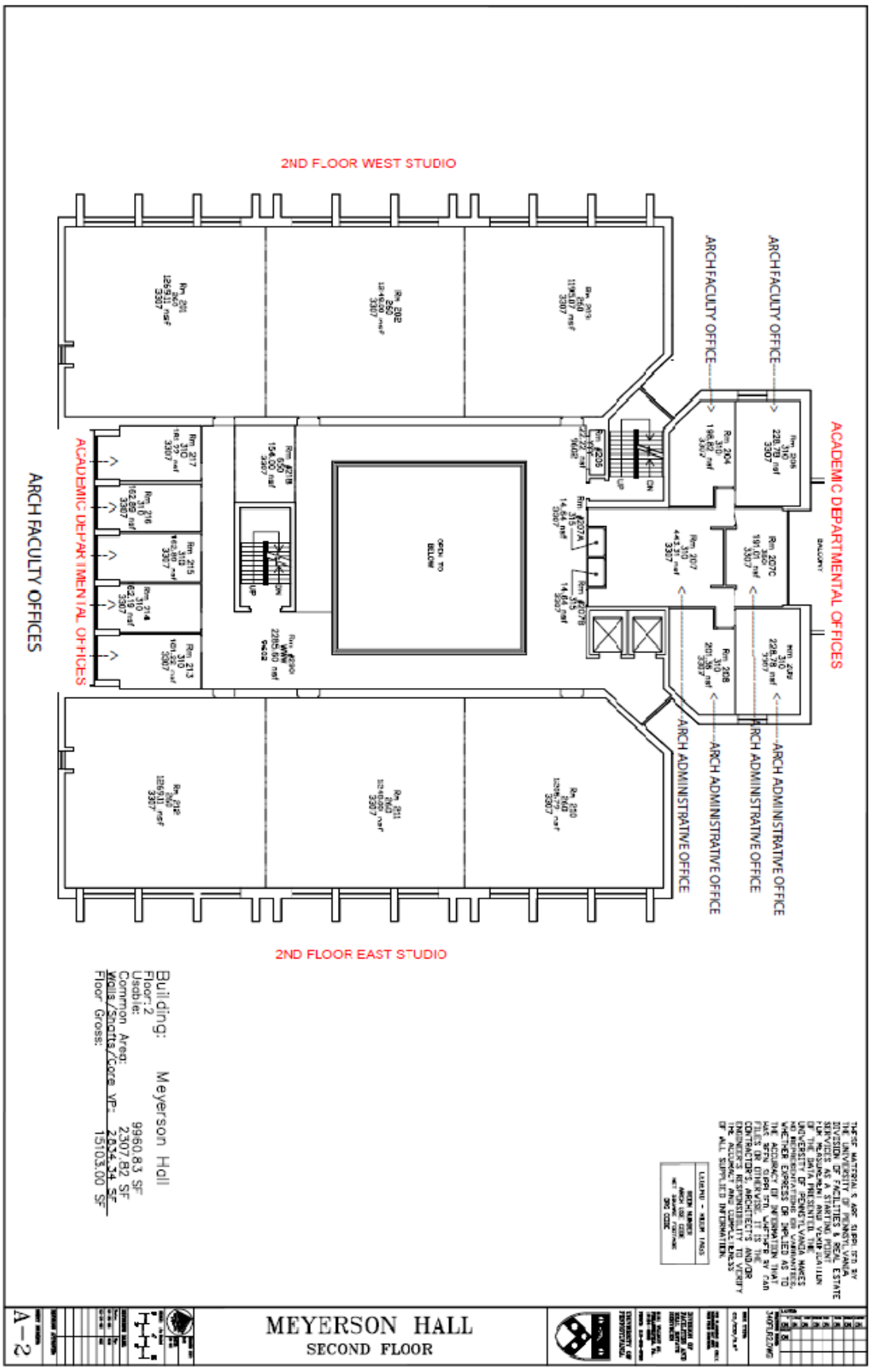
Appendix 2 Library Staff Expenditures

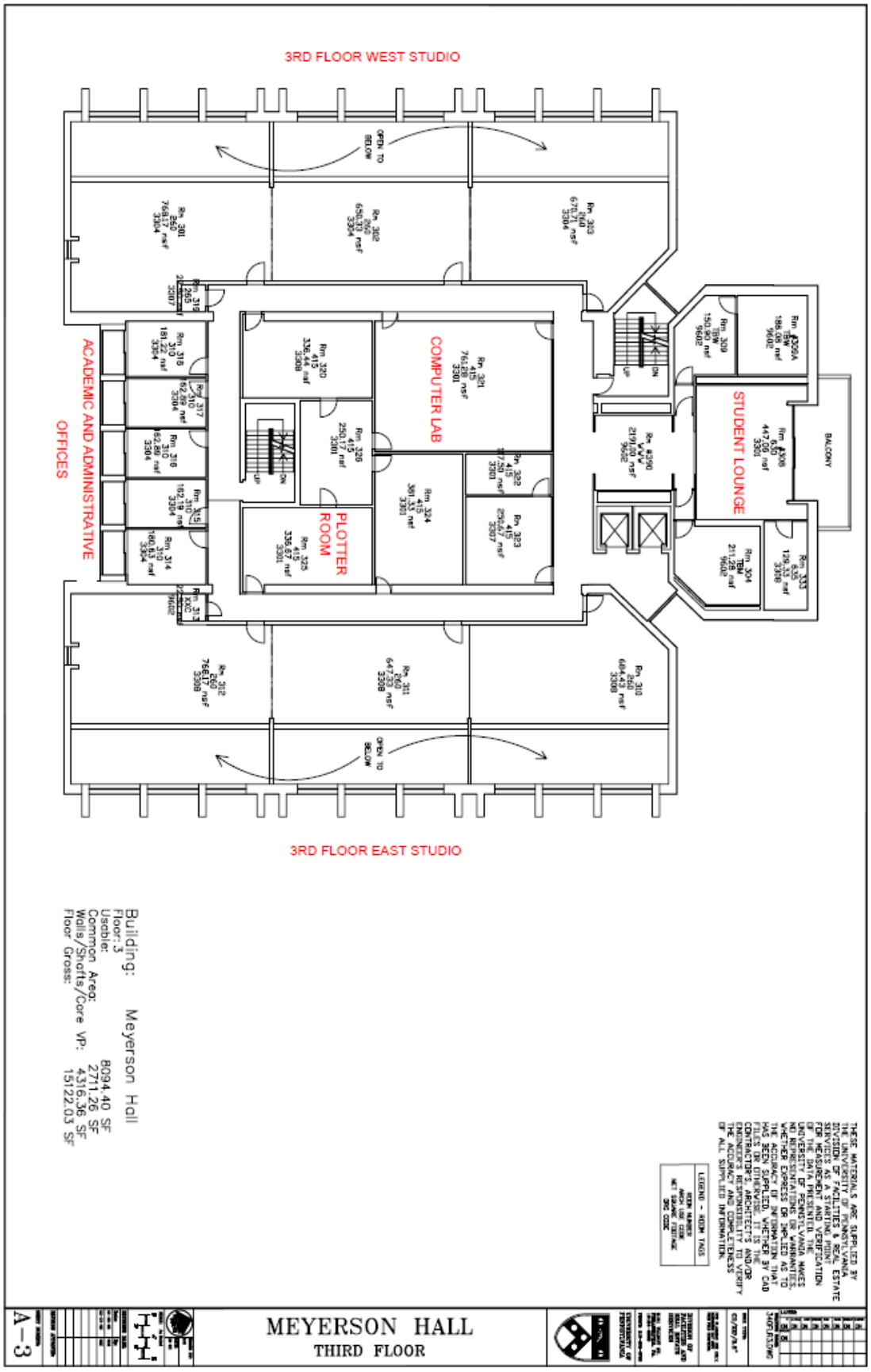
TYPES OF POSITIONS	FTE'S FY08	FTE'S FY09	FTE'S FY10
LIBRARIANS/VR PROFESSIONALS	2	2	2
PARAPROFESSIONALS	8	8	8
CLERKS	0	0	0
STUDENT ASSISTANTS	9	9	9
VOLUNTEERS	0	0	0
OTHER	0	0	0
TOTAL	19	19	19

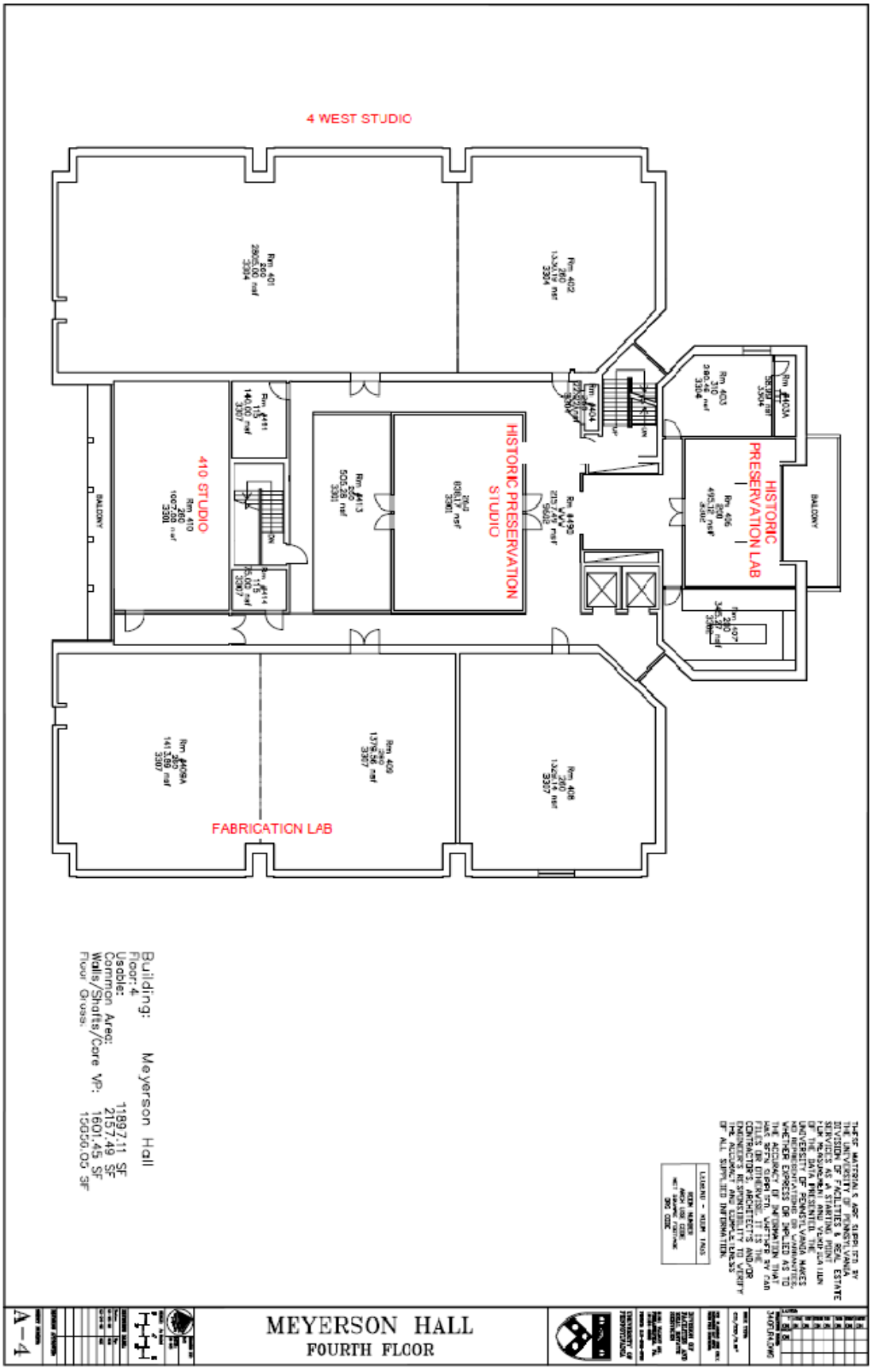
Floorplans

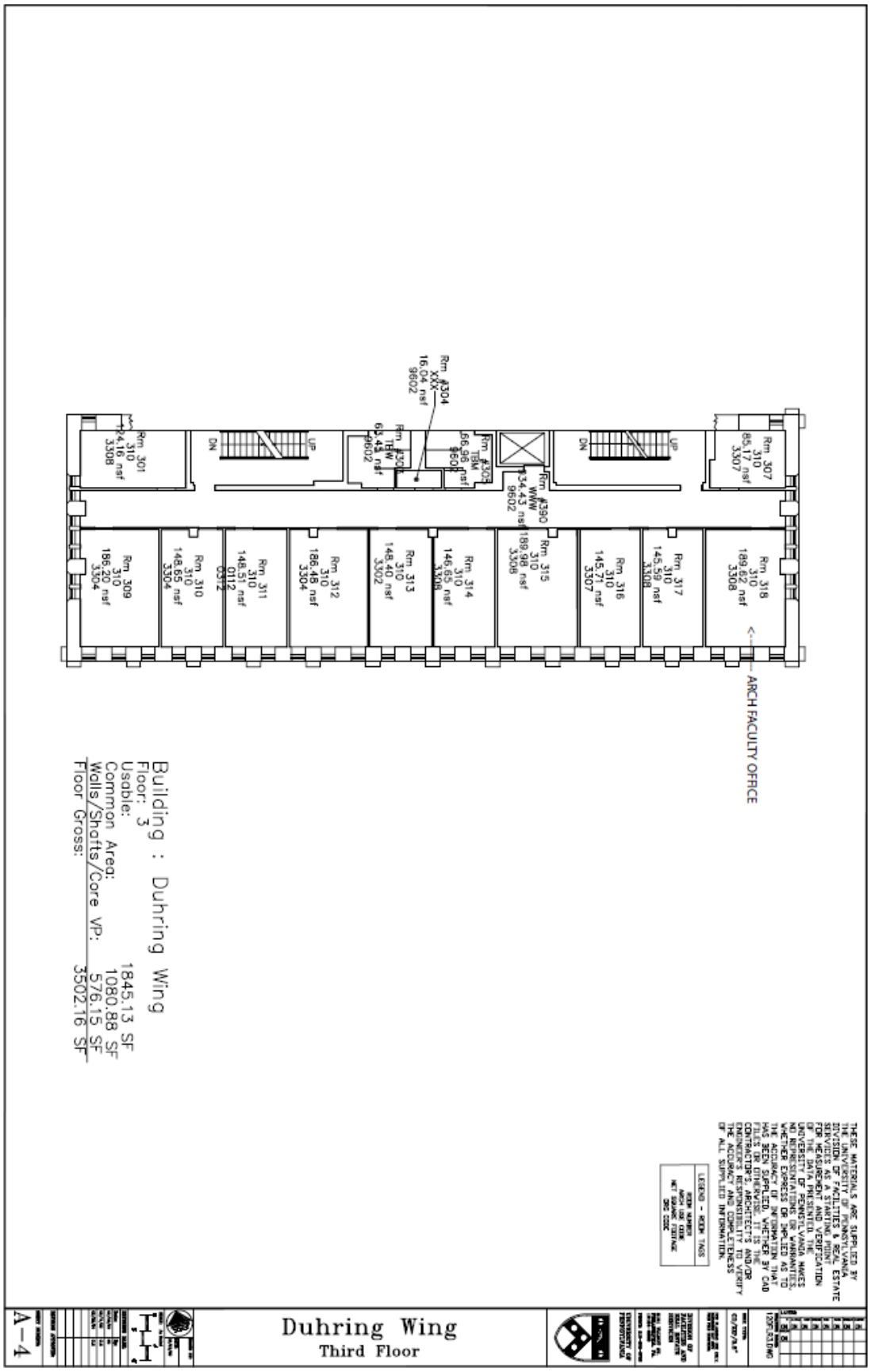
Appendix 3 School of Design Building

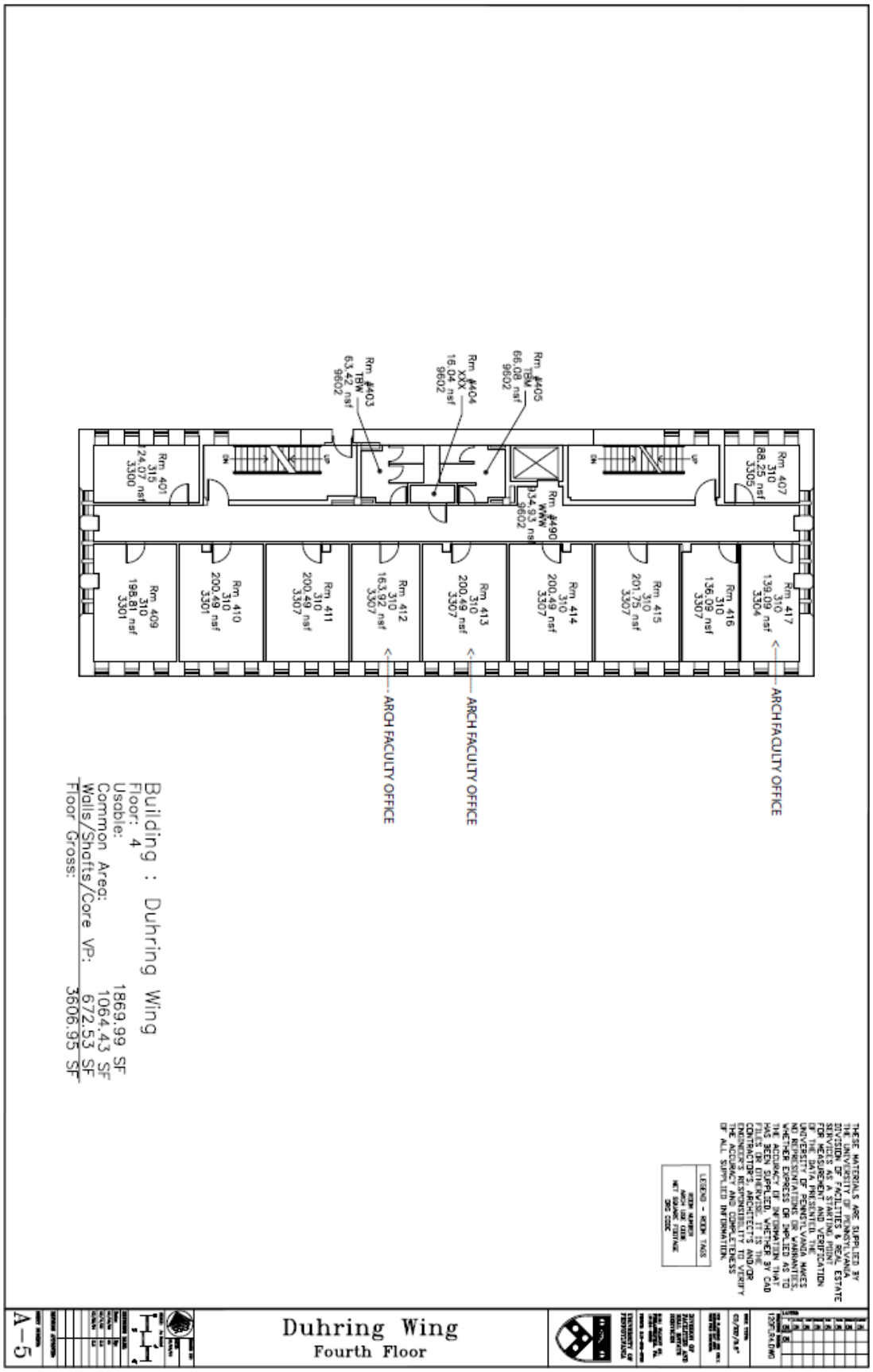


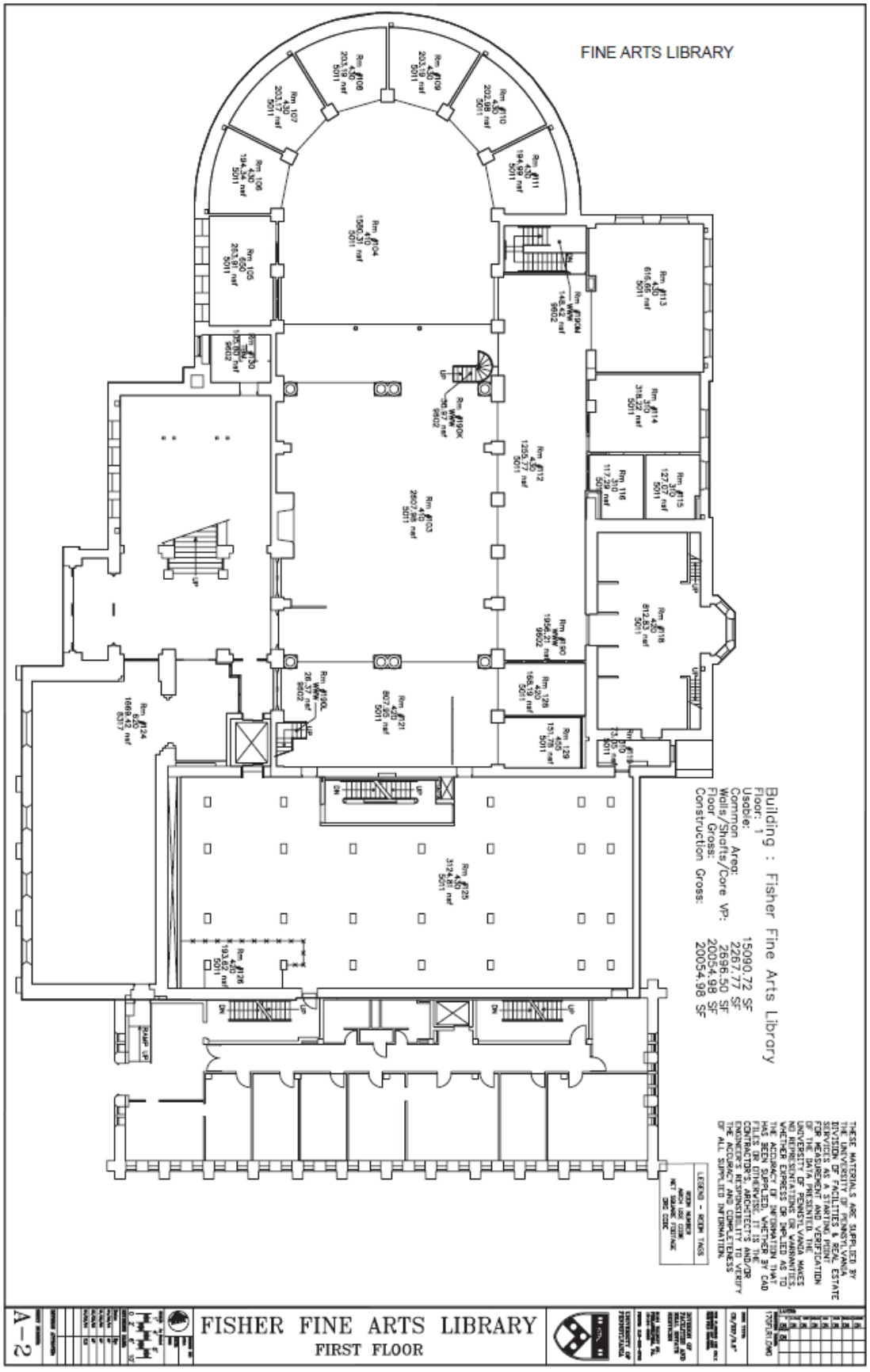

2ND FLOOR WEST STUDIO
ARCH FACULTY OFFICE
ARCH FACULTY OFFICE
ACADEMIC DEPARTMENTAL OFFICES
ARCH ADMINISTRATIVE OFFICE
ARCH ADMINISTRATIVE OFFICE
ARCH ADMINISTRATIVE OFFICE
ARCH ADMINISTRATIVE OFFICE
ARCH FACULTY OFFICES
ACADEMIC DEPARTMENTAL OFFICES
OPEN TO BELOW
2ND FLOOR EAST STUDIO
Building: Meyerson Hall
Floor: 2
Usable: 9960.83 SF
Common Area: 2307.82 SF
Walls/Shafts/Core: 2834.34 SF
Floor Gross: 15103.00 SF
MEYERSON HALL
SECOND FLOOR
A-2

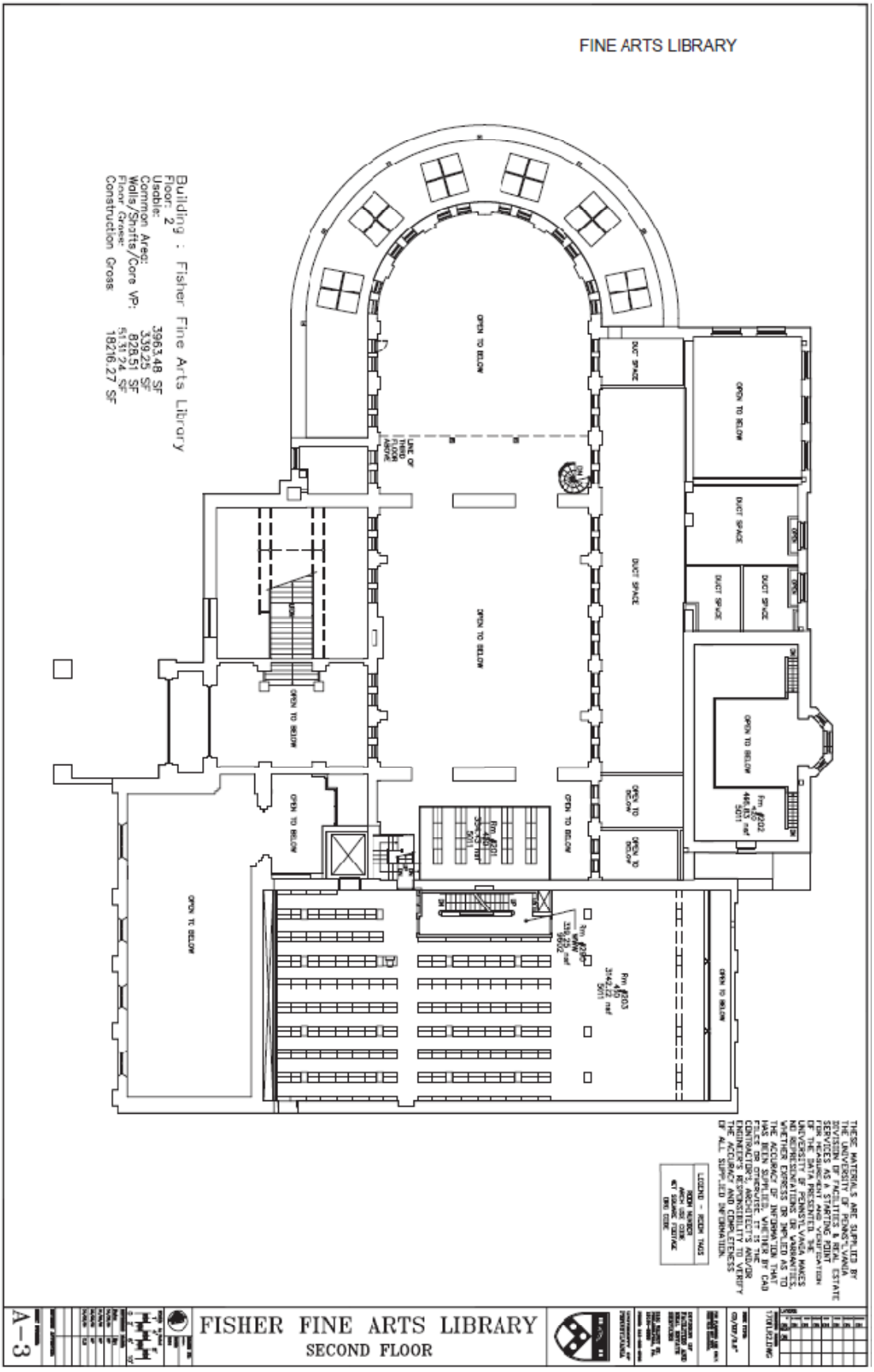

3RD FLOOR WEST STUDIO
ACADEMIC AND ADMINISTRATIVE OFFICES
COMPUTER LAB
PLOTTER ROOM
STUDENT LOUNGE
BALCONY
3RD FLOOR EAST STUDIO
Building: Meyerson Hall
Floor: 3
Usable: 8094.40 SF
Common Area: 2711.26 SF
Walls/Shafts/Core VP: 4316.36 SF
Floor Gross: 15122.03 SF
MEYERSON HALL
THIRD FLOOR
A-3

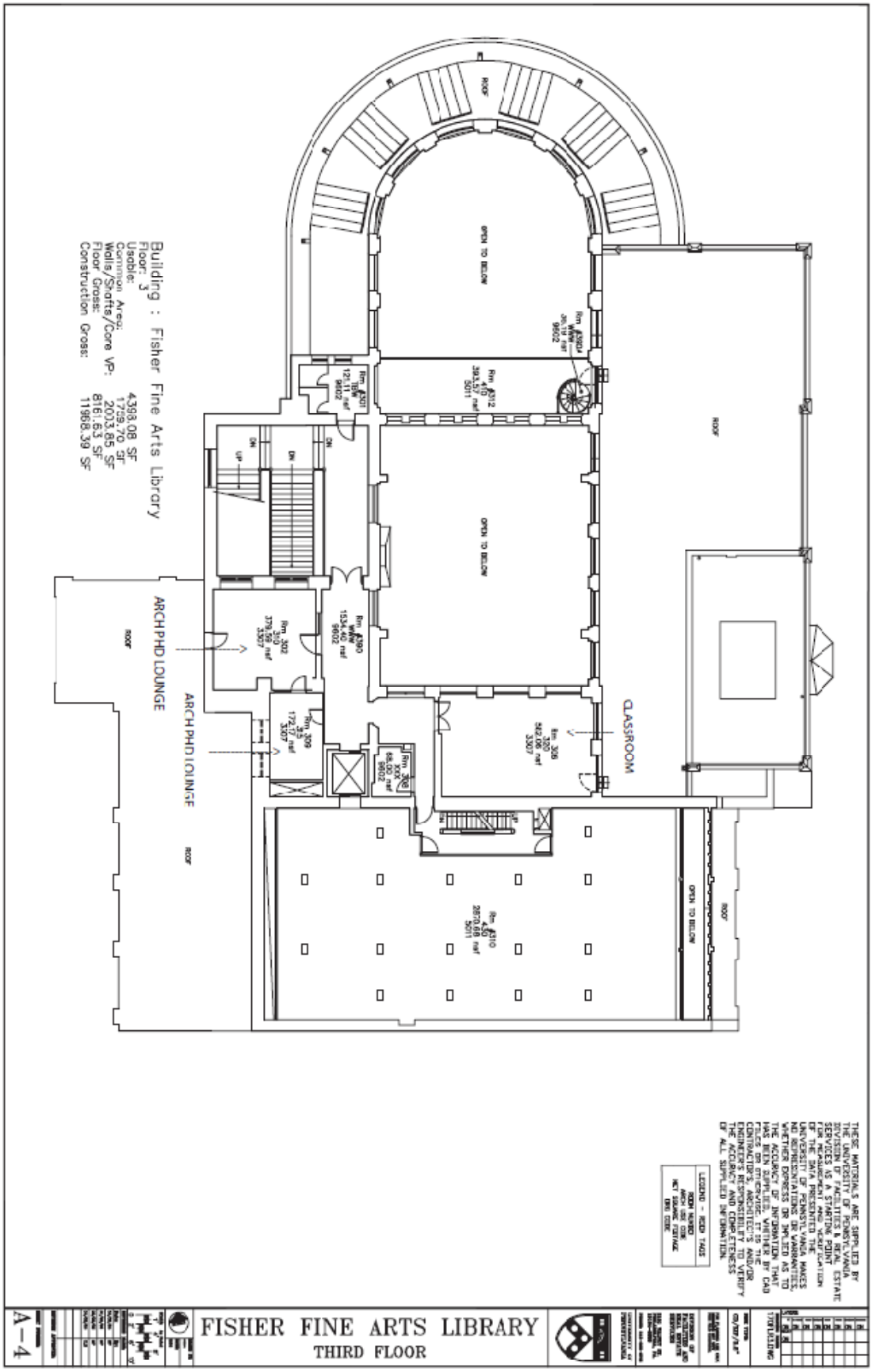

4 WEST STUDIO
410 STUDIO
HISTORIC PRESERVATION STUDIO
HISTORIC PRESERVATION LAB
FABRICATION LAB
BALCONY
BALCONY
Building: Meyerson Hall
Floor: 4
Usable: 11897.11 SF
Common Area: 2157.49 SF
Walls/Shafts/Core VP: 1601.45 SF
Floor Gross: 15656.05 SF
MEYERSON HALL
FOURTH FLOOR
A-4

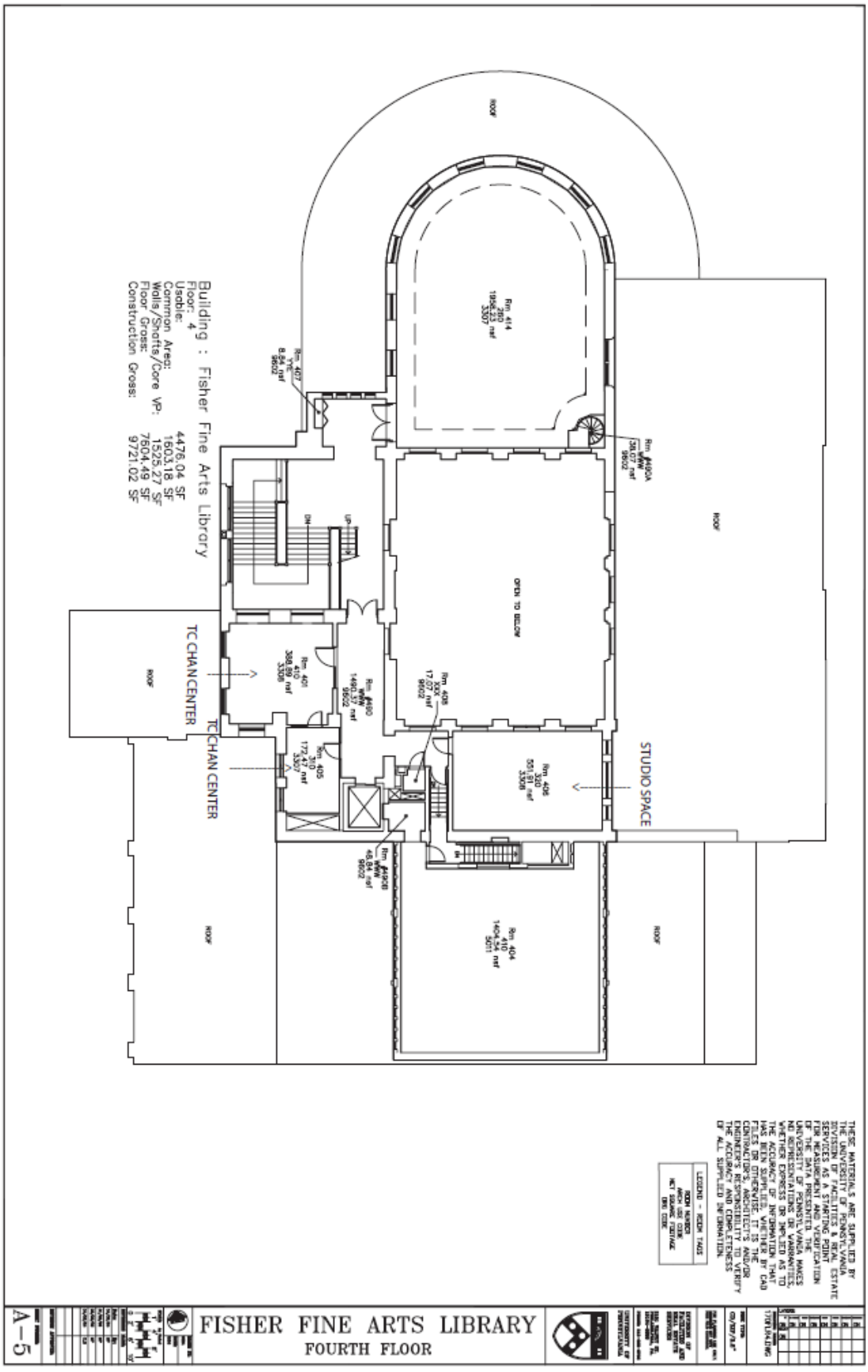

Rm 307
310
85.17 nsf
3307
Rm 318
310
189.62 nsf
3308
Rm 317
310
145.59 nsf
3308
Rm 316
310
145.77 nsf
3307
Rm 315
310
189.98 nsf
3308
Rm 314
310
146.65 nsf
3308
Rm 313
310
148.47 nsf
3302
Rm 312
310
186.48 nsf
3304
Rm 311
310
148.51 nsf
0312
0312
Rm 310
310
148.55 nsf
3304
Rm 309
310
186.20 nsf
3304
Rm 301
310
24.16 nsf
3308
UP
DN
Rm #304
XXX
16.04 nsf
9602
Rm #303
TBM
56.96 nsf
9602
Rm #390
WWW
33.43 nsf
9602
ARCH FACULTY OFFICE
Building : Duhring Wing
Floor: 3
Usable: 1845.13 SF
Common Area: 1080.88 SF
Walls/Shafts/Core VP: 576.15 SF
Floor Gross: 3502.16 SF
LEGEND - ROOM TAGS
ROOM NUMBER
ARCH USE CODE
NET SQUARE FOOTAGE
SPC CODE
THESE MATERIALS ARE SUPPLIED BY THE UNIVERSITY OF PENNSYLVANIA DIVISION OF FACILITIES & REAL ESTATE SERVICES AS A STARTING POINT FOR MEASUREMENT AND VERIFICATION OF THE BUILDING INFORMATION. UNIVERSITY OF PENNSYLVANIA MAKES NO REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESS OR IMPLIED AS TO THE ACCURACY OF INFORMATION THAT HAS BEEN SUPPLIED. WHETHER BY CAD FILES OR HARD COPY. IT IS THE CONTRACTOR'S, ARCHITECTS AND/OR ENGINEER'S RESPONSIBILITY TO VERIFY THE ACCURACY AND COMPLETENESS OF ALL SUPPLIED INFORMATION.
Duhring Wing
Third Floor
A-4


Rm 407
310
88.25 nsf
3305
Rm 417
310
139.09 nsf
3304
Rm 416
310
136.09 nsf
3307
Rm 415
310
201.75 nsf
3307
Rm 414
310
200.49 nsf
3307
Rm 413
310
200.49 nsf
3307
Rm 412
310
163.92 nsf
3307
Rm 411
310
200.49 nsf
3307
Rm 410
310
200.49 nsf
3301
Rm 409
310
198.81 nsf
3301
Rm 401
315
24.07 nsf
3300
Rm #403
TBW
63.42 nsf
9602
Rm #404
XXX
16.04 nsf
9602
Rm #405
TBW
66.08 nsf
9602
Rm #490
WWW
34.93 nsf
9602
ARCH FACULTY OFFICE
ARCH FACULTY OFFICE
ARCH FACULTY OFFICE
Building : Duhring Wing
Floor: 4
Usable: 1869.99 SF
Common Area: 1064.43 SF
Walls/Shafts/Core VP: 672.53 SF
Floor Gross: 3606.95 SF
THESE MATERIALS ARE SUPPLIED BY THE UNIVERSITY OF PENNSYLVANIA DIVISION OF FACILITIES & REAL ESTATE SERVICES AS A STARTING POINT FOR MEASUREMENT AND VERIFICATION OF INFORMATION. THE UNIVERSITY OF PENNSYLVANIA MAKES NO REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESS OR IMPLIED AS TO THE ACCURACY OF INFORMATION THAT HAS BEEN SUPPLIED. WHETHER BY CAD FILES OR OTHERWISE. IT IS THE CONTRACTOR'S, ARCHITECT'S AND/OR ENGINEER'S RESPONSIBILITY TO VERIFY THE ACCURACY AND COMPLETENESS OF ALL SUPPLIED INFORMATION.
LEGEND - ROOM TAGS
ROOM NUMBER
ARCH USE CODE
NET SQUARE FOOTAGE
DRS CODE
Duhring Wing
Fourth Floor
A-5


FINE ARTS LIBRARY
Building : Fisher Fine Arts Library
Floor: 1
Usable: 15090.72 SF
Common Area: 2267.77 SF
Walls/Shafts/Core VP: 2696.50 SF
Floor Gross: 20054.98 SF
Construction Gross: 20054.98 SF
THESE MATERIALS ARE SUPPLIED BY THE UNIVERSITY OF PENNSYLVANIA DIVISION OF FACILITIES & REAL ESTATE SERVICES AS A STARTING POINT FOR MEASUREMENT AND VERIFICATION OF THE BUILDING AS BUILT. THE UNIVERSITY OF PENNSYLVANIA MAKES NO REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESS OR IMPLIED AS TO THE ACCURACY OF INFORMATION THAT HAS BEEN SUPPLIED. VERIFICATION OF FIELD CONDITIONS BY CAD CONTRACTORS, ARCHITECTS AND/OR ENGINEER'S RESPONSIBILITY TO VERIFY THE ACCURACY AND COMPLETENESS OF ALL SUPPLIED INFORMATION.
LEGEND - ROOM TAGS
A-2
FISHER FINE ARTS LIBRARY
FIRST FLOOR


FINE ARTS LIBRARY
Building : Fisher Fine Arts Library
Floor: 2
Usable: 3963.48 SF
Common Area: 339.25 SF
Walls/Shafts/Core VP: 828.51 SF
Floor Gross: 5131.24 SF
Construction Gross 18216.27 SF
OPEN TO BELOW
DUCT SPACE
LINE OF THIRD FLOOR ABOVE
THESE MATERIALS ARE SUPPLIED BY THE UNIVERSITY OF PENNSYLVANIA DIVISION OF FACILITIES & REAL ESTATE SERVICES AS A STARTING POINT FOR MEASUREMENT AND VERIFICATION OF THE DATA PRESENTED. THE UNIVERSITY OF PENNSYLVANIA MAKES NO REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESS OR IMPLIED AS TO THE ACCURACY OF INFORMATION THAT HAS BEEN SUPPLIED, WHETHER BY CAD FILES OR OTHERWISE. IT IS THE CONTRACTOR'S, ARCHITECT'S AND/OR ENGINEER'S RESPONSIBILITY TO VERIFY THE ACCURACY AND COMPLETENESS OF ALL SUPPLIED INFORMATION.
LEGEND - ROOM TAGS
A-3
FISHER FINE ARTS LIBRARY
SECOND FLOOR


Building : Fisher Fine Arts Library
Floor: 3
Usable: 4398.08 SF
Common Area: 1759.70 SF
Walls/Shafts/Core VP: 2003.85 SF
Floor Gross: 8161.63 SF
Construction Gross: 11968.39 SF
ARCH PHD LOUNGE
ARCH PHD LOUNGE
CLASSROOM
OPEN TO BELOW
ROOF
FISHER FINE ARTS LIBRARY
THIRD FLOOR
A-4


Building : Fisher Fine Arts Library
Floor: 4
Usable: 4476.04 SF
Common Areas: 1603.18 SF
Walls/Shafts/Core VP: 1525.27 SF
Floor Gross: 7604.49 SF
Construction Gross: 9721.02 SF
ROOF
OPEN TO BELOW
STUDIO SPACE
TC CHAN CENTER
TC CHAN CENTER
FISHER FINE ARTS LIBRARY
FOURTH FLOOR
A-5

Appendix 4 Lectures and Events since last accreditation visit

2004-05

September 9
CHIP LORD
Ant Farm
Professor, University of California Santa Cruz
"Ant Farm and Beyond"

Tuesday, September 14
OLAFUR ELIASSON
Werkstatt & Buro, Berlin
"Recent Work"

September 23
DOYALD YOUNG
Graphic designer, typographer

September 23
SETHA LOW
The City University of New York
"Social Sustainability: A Framework for Assessing Cultural Values for Design, Planning and Historic Preservation Professionals"

September 24
SUSAN SINGH
Klein and Hoffman, Inc. Chicago
"Complexities in Conservation of a Temporary Post-War Structure:

September 30
ANTHONY VIDLER
Dean and Professor, Cooper Union
"Toward a Theory of the Architectural Program: Between Cybernetics and Utopia"

September 30
LYNDA BENGLIS
Sculptor
Slide Lecture

October 4
MARIE ELANA GONZALEZ
Sculptor, Resides in Brooklyn, NY
Slide lecture

October 6
KATE WARE
Curator of Photographs, Philadelphia Museum of Art
Slide lecture

October 6-8
The Abel & Mary Nicholson House Charrette
Developing a Vision for the Future of a National Historic Landmark

October 14
MATTHEW COOLIDGE
Director, Center for Land Use Interpretation
"Interpreting Anthropogeomorphology: Programs and *Projects of the Center for Land Use Interpretation"*

October 18
KELLER EASTERLING
Yale University
"Enduring Innocence"

October 18
COLLIER SCHORR
Photographer, Resides Brooklyn, NY
Slide lecture

October 20
ALFRED LESLIE
Senior Critic, PennDesign
Film screening "the chekhov cha cha"

October 21
JORGE RIGAU
Dean, La Nueva Escuela de Arquitectura
Universidad Politecnica de Puerto Rico
"Spaces for Debate: Constructions in Literature, Architecture and Pedagogy"

October 26
DEBRA SOLOMON
Animator, New York City
Lecture

October 28
ELLEN SHOSH KES, PhD
"Creating Communities of Learning: Schools and Smart Growth"

October 28
JUDY PETERS
University of Pennsylvania

"The Uses of GIS in Historic Preservation"

October 29
JUDY PFAFF
Sculptor, Resides Syracuse, NY
Slide lecture

October 29
JUDY PFAFF, AMY SILLMAN, VIRGIL MARTI
ICA Ramp Project Symposium

November 4
LINDA CHAPIN
November 8
LUCA GALOFARO
Ian+ Rome
Università Degli Studi Roma TRE
"Microinfrastructures"

November 11
DAVID N. FIXLER, AIA
Einhorn Yaffee Prescott
"From Archaeology to Idea: Emerging Perspectives on
Modern Movement Preservation"

November 12
JUDITH SHEA
Senior Critic, Sculptor, Resides New York, NY
Slide lecture

November 15
BOOK LAUNCH
David Leatherbarrow
"Topographical Stories: Studies in Landscape and Architecture"
Ali Malkawi and Godfried Augenbroe
"Advanced Building Simulation"

November 17
LISA YUSKAVAGE
Painter, Resides New York, NY
CLAUDIA GOULD
Director, ICA, Philadelphia
"ICA 40th Anniversary Series Lecture"

November 18
ANNETTE FIERRO
Associate Professor, Department of Architecture
"Transparency and the Glass State:
La Bibliothèque nationale François Mitterrand"

November 18
CHRISTOPHER ROBINSON
Film maker, Animator, Canada
Lecture

November 19
JULIE HEFFERNAN
Painter, Resides New York, NY
Slide lecture

November 22
PATRIK SCHUMACHER
Zaha Hadid Architects
Professor, Architectural Association, London
"Recent Work"

November 22
THOMAS DEMAND
Photographer, Resides New York, NY

November 30
MICHELLE COURNOYER
Painter, animator, Canada
Lecture

December 3
PETER WALKER
Peter Walker and Partners, Berkeley
"Recent Work"

December 6
ISRAEL HERSHBERG
Painter, Resides Jerusalem, Israel
Slide Lecture

January 13
ANITA BERRIZBEITIA
"Roberto Burle Marx in Caracas: Parque del Este Caracas, 1956-1961"
JOHN DIXON HUNT
"The Afterlife of Gardens"

January 19
ROBERT VENTURI
DENISE SCOTT BROWN
"Architecture as Signs and Systems for a Mannerist Time"

Thursday, January 20
DAVID GRAHAM

Photographer, resides Philadelphia, PA

January 24
SARAH McCOUBREY
Painter, resides Fayetteville, NY

January 26
"MY ARCHITECT"

February 2
YING LI
Painter, resides New York, NY

Thursday, February 3
BILL CORBETT
Poet
"The Paintings of Albert York"

February 7
KINYA MARIYAMA
Professor, Arts and Architecture School, Waseda University
Team Zoo, Tokyo, Japan
"Recent Projects and Workshops"

February 7
ROBERT SILMAN
Robert Silman and Associates, New York, NY
"What Went Wrong With Wright? Repairing and Preparing for the Next Century"

February 9
ADA KARMI-MELAMEDE
Architect, Tel-Aviv
"Personal Ground"

February 10
PennDesign Charrette Opening Speaker
STANTON ECKSTUT, FAIA
Ehrenkrantz Eckstut & Kuhn Architects, New York
"Gambling on Cities"

February 11-13
GAMBLING IN PHILADELPHIA
Penn Praxis Design Charrette

February 10
ISAAC JULIEN
Film maker, resides London, UK
Film screening and discussion
5pm, B3 Meyerson

February 15
STEPHEN WOLFRAM
Founder & CEO, Wolfram Research, Champaign
"A New Kind of Science"

February 16
ALFRED LESLIE
Senior critic, resides New York, NY
Film screening *"Chekhov Cha Cha"*

February 17
PETER JACOBS
Professor of Landscape Architecture
Université de Montréal
Lecture

February 21
GEORGES DESCOMBES
Landscape Architect, Geneva, Switzerland
"Superpositions – Recent Work"

February 21
PAUL CHAN
Video artist, resides New York, NY

February 22
LIBBY LUMPKIN
Critic and writer
Lecture

February 24
THOMAS McEVILLEY
Critic, resides New York, NY

February 24
BRUCE MAU
Bruce Mau Design, Toronto
Director, Institute Without Boundaries, George Brown College, Toronto
"Massive Change: The Future of Global Design"

March 3
NIGEL ROLFE
Performance artist, resides Ireland
Senior critic
Video screening and slide lecture

March 14
SANDY SORLIEN
Photographer, resides Philadelphia, PA

Lecture
5pm, B3 Meyerson
Sponsored by the Department of Fine Arts

March 14
ANURADHA MATHUR
DILIP DA CUNHA
"Deccan Traverses"

March 16
FRANCOIS ROSCHE
R&Sie, Paris
"Perverse Ecologies"

March 17
WALTER HOOD
Chair, Department of Landscape Architecture
University of California - Berkeley
"Hybrid Neighborhoods"

March 17
BARBARA SCHWARTZ
Painter, resides New York, NY

RESISTANCE, SPIEGEL SYMPOSIUM: PANELS
Moderators: Christine Poggi, Detlef Mertins, Tim Corrigan, Robert Storr
Panelists include: Chrissie Iles, Klaus Kertess, Ingrid Schaffner, Alexander Eisenschmidt, David Lewis, Mark Wasiuta, Peter Decherney, David James, Allen Ruppersberg, Beverly Semmes

March 21
CHRISTOPHER MONTGO WILSON
School of Architecture and Planning
University of New Mexico
Lecture

March 24
MARK GOULTHORPE
dECOi, Boston/Paris
Associate Professor, MIT
"Immergence"

March 31
SCARCITY AND EXCESS: ECOLOGICAL ARCHITECTURE SYMPOSIUM

April 7
HERNAN DIAZ ALONZO
Xefirotarch, Los Angeles
SCI Arc
"Grotesque Mutations, Horrific Variations"

April 7
DEANE EVANS
Research professor and executive director of the Center for Architecture and Building Science Research at
New Jersey Institute of Technology

April 7
CHUCK CLOSE
Painter, resides New York, NY
Locks Foundation Distinguished Artist Series

April 13
MOSHE SAFDIE
Louis I. Kahn Memorial Lecture

April 14
BRANKO KOLAREVIC
ALI MALKAWI
Book launch
"Performative Architecture: Beyond Instrumentality"

April 21
CARL ELEFANTE, AIA, LEED
Principal, Quinn Evans Architects, Washington, DC

Exhibitions:

February 13 – March 11
ARCHITECTURE: IMAGES OF THE BUILT ENVIRONMENT IN CONTEMPORARY PAINTING

March 14 – April 1
DECCAN TRAVERSES
Anuradha Mathur & Dilip da Cunha
Lower Gallery, Meyerson
Reception: Monday, March 14, 6 pm

March 15 – May 17
DESIGNING AN AMERICAN ASSET
From the National Building Museum
Left Bank

April 2 – May 6
BECKY YOUNG
Addams Gallery

2005-06

September 8
ALEXANDER GARVIN
Principal, Alex Garvin & Associates, Inc.
Planning, Design & Development
"Planning Atlanta's Emerald Necklace"

September 12
KEVIN JONES
Archaeologist, New Zealand Department of Conservation
"Prospects for Cultural World Heritage in the Pacific Ocean Region"

September 19
LAWRENCE BEASLEY
Co-Director of Planning and Director of Current Planning for the City of Vancouver
"Vancouver: City of the Future"

September 19
PETER LATZ
Latz und Partner Landscape Architects, Germany
Adjunct Professor of Landscape Architecture, PennDesign

September 22
YOLANDE DANIELS
Columbia University
Studio SUMO, New York City
"In Progress"

September 23 – Tuesday, September 27
IAWIS / AIERTI 7th International Conference on Word & Image Studies: Elective Affinities
Faculty participants include Profs. John Dixon Hunt and David Leatherbarrow, who are chairing a session on "Reading and Writing the Site." Professors Peter Stallybrass (Penn) and Yve-Alain Bois (Institute for Advanced Study, Princeton), and author Art Spiegelman will offer keynote lectures.

September 29
MASSILLIANO FUKSAS
Fuksas Architects, Rome
"Four Projects, Lost in Translation""

October 3
SEBASTIEN MAROT
Author and critic, Paris
"Palimpsestuous Ithaca: A Relative Manifesto"

October 6
JOHN DIXON HUNT
Professor of the History and Theory of Landscape
PennDesign
"Unconnected Paragraphs on Finlay's Garden Designs"

October 10
NUBAR GIANIGHIAN
Professor, Instituto Universitario di Architttura di Venezia
Dipartimento di Pianificazione
"Restoring the Clock Tower in Venice (1858 and 2004)"

October 10
HOMA FARJADI
University of Pennsylvania
Architect, London
"Non Contingent Locations"

October 13
MOSTYN BRAMLEY-MOORE
Painter

October 17
KURT FORSTER
Yale University
"VOID & FLORID: Tensions in 20th-century Architecture"

October 17
SHARON HORVATH
Painter

October 20
JULIE BARGMANN
University of Virginia
"Toxic Beauty"

October 20
KYRA STRAUSSMAN
President, Cool Space Locator

October 27
CHARLES JENCKS
Author
"Garden of Cosmic Speculation"

November 1
DAVE HICKEY
Critic

November 1 – 15
NEIL WELLIVER and ROBERT SLUTZKY Exhibition
A quiet and eloquent tribute to the late Neil Welliver and Robert Slutzky

November 3
MARION WEISS
University of Pennsylvania
Weiss/Manfredi Architects, New York
"Recent Work"

November 4-11
PHILADELPHIA PROJECTS
Exhibition

November 7
PHILADELPHIA PROJECTS
Panel Discussion

November 7
ROBERT Z. MELNICK
Visiting Senior Program Officer
The Getty Foundation, Los Angeles
"Both Prospect and Refuge: Views of Landscape Preservation"

Mon, Nov 7 – Tue, Nov 8
Planning Accreditation Board Site Visit
Department of City & Regional Planning

November 8
ALEX GIBNEY
Filmmaker

November 10
VICENTE GUALLART
Guallart Architects, Barcelona
Director, IAAC, Barcelona
"Microgeographies"

November 10
N_LSO, Workshops in Irreducible Complexity
Conference
Keynote Lecture

November 11
N_LSO, Workshops in Irreducible Complexity
Conference

Thursday, November 17
Structure and Meaning in Human Settlements
Tony Atkin and Joseph Rykert, Editors
Book Launch and Reception

Thursday, January 12
BARBARA FAGA
Chair, EDAW, Inc.
"Designing Public Process"

Thursday, January 19
BEN VAN BERKEL
Professor of Conceptual Design, Staedelschule, Frankfurt
Principal, UN Studio, Amsterdam
"Recent Works"

BOOM: New Philadelphia Architecture
Panel Discussion
Detlef Mertins, Moderator

January 26
PIET OUDOLF
Horticultural and planting designer, The Netherlands
"Design, Plants and the Dynamics of Time"

January 30
JAMES JOHNSON-PIETT
Project Associate, The Food Trust
"Pennsylvania Fresh Food Financing Initiative"

February 2
ALI RAHIM
Assistant Professor, Department of Architecture, PennDesign

February 6
INAKI ABALOS
Visiting Professor, Architecture Design, Princeton

February 9
JUDY GLANTZMAN
Painter

February 9
HJALTI KARLSSON
JAN WILKER
KarlssonWilker, NYC, Graphic Designers

Sponsored by the Philomathean Society and AIGA/Philadelphia

February 9
PENN PRAXIS CHARRETTE
OPENING SPEAKER

February 13
ROGER DUFFY
Partner, Skidmore, Owings & Merrill, LLP, New York
“Recent Works”

February 16
BERNARD LASSUS
Landscape Architect, Paris
“Jardins de Paysages ou Paysages de Jardins”

February 20
CHARLES JENCKS
Author, Architect
“The Iconic Building: the Power of Enigma”

February 23
MICHAEL B. TEITZ
Senior Fellow, Public Policy Institute of California
Professor Emeritus, City & Regional Planning,
University of California – Berkeley
”Regionalism in California”

February 27
BRAD LANDER
VICKI WEINER
Pratt Center for Community Development
“Historic Preservation and Community Development:
Conflicts and Opportunities”

March 2
WILLIAM BORAH
Chair, Smart Growth for Louisiana
“Rebuilding Plans for New Orleans”

March 13
DANIEL MAUDLIN
University of Plymouth, UK
“Architecture on the Edge of Empire: the Standardization of
Domestic Architecture in the British Atlantic World, 1750-1850.”

March 16
JEANNE DUNNING
Photographer

March 16
DAVID ADJAYE
Principal, David Adjaye Architect, London
Visiting Louis I. Kahn Professor of Architecture, PennDesign

March 16
NIKOLAUS HIRSCH
Partner, Wandel Hoefer Lorch & Hirsch, Frankfurt
“Making Public Buildings”

March 23
CRAIG VERZONE
CRISTINA WOODS
Architects / Landscape Architects, VWA
Rougemont, Switzerland
“Landscape, Practice, Building”
6pm, Upper Gallery Meyerson

March 30
TERENCE RILEY
The Philip Johnson Chief Curator,
Architecture and Design, MOMA, NY
Principal, K/R Architects, New York
"Modern in a Post-modern World"

April 3
T. GUNNY HARBOE
Harboe Architects, Chicago
“Preserving the Legacy Mies:
Current Work at the Illinois Institute of Technology”

April 6
DENIS COSGROVE
Professor of Geography, UCLA
Ian L. McHarg Lecture
“Los Angeles, Landscape and Modernity”

April 10
THOMAS LESLIE
Assistant Professor, Iowa State University
"Louis I. Kahn: Building Art, Building Science"
Book signing and reception immediately following lecture

April 17
DOUGLAS S. KELBAUGH FAIA
Dean and Professor of Architecture and Urban Planning,

University of Michigan, Alfred A. Taubman College of Architecture + Urban Planning
Inaugural Don Prowler Endowed Lecture in Sustainable Design
"Correcting the Seven Fallacies of Architectural Culture"

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Project Associate, The Food Trust
"Pennsylvania Fresh Food Financing Initiative"

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ALI RAHIM
Assistant Professor, Department of Architecture, PennDesign
Director, Contemporary Architecture Practice, New York
“Catalytic Formations”

February 6
INAKI ABALOS
Visiting Professor, Architecture Design, Princeton University
Principal, Abalos & Herreros, Madrid
“Pavilions, Observatories and Recycled Landscapes”

February 9
JUDY GLANTZMAN
Painter

February 9
HJALTI KARLSSON
JAN WILKER
KarlssonWilker, NYC, Graphic Designers

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PENN PRAXIS CHARRETTE
OPENING SPEAKER
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"Making Public Buildings"

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CRISTINA WOODS
Architects / Landscape Architects, VWA
Rougemont, Switzerland
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Dean and Professor of Architecture and Urban Planning,
University of Michigan, Alfred A. Taubman College of Architecture + Urban Planning
Inaugural Don Prowler Endowed Lecture in Sustainable Design: "Correcting the Seven Fallacies of Architectural Culture"

EXHIBITIONS

January 23 - 29
BOOM: New Philadelphia Architecture
Upper Gallery, Meyerson
Reception: Monday, January 23, 6pm

June 29 - September 30
Crafting a Modern World:
The Architecture and Design of Antonin and Noemi Raymond
Meyerson Galleries
Sponsored by the Philadelphia Exhibitions Initiative, a grant program funded by
The Pew Charitable Trusts and administered by The University of the Arts, Philadelphia

2006-07

September 7
A. EUGENE KOHN
Principal, Kohn Pederson Fox Associates PC, New York
JORDAN L. GRUZEN
Partner, Gruzen Samton LLP, New York
“Planned Communities of the Future”

September 14
MIRA NAKASHIMA-YARNALL
George Nakashima Woodworker, S.A., New Hope, PA
“Nature, Form, and Spirit”

September 18
PAULA MARINCOLA
“Real World”

September 20
FERTILIZERS: EISENMAN / OLIN IN CONVERSATION
Peter Eisenman (Eisenman Architects)
Laurie Olin (Olin Partnership; Practice Professor of Landscape Architecture, PennDesign)
Julia Czerniak (School of Architecture, Syracuse University)

September 21
GLYNN WILLIAMS
Sculptor
Head of the School of Fine Art
Royal College of Art, London

September 21
KENNETH FRAMPTON
Ware Professor of Architecture, Graduate School of Architecture, Planning and Preservation, Columbia University
“The Tectonic Sensibility of Antonin Raymond”

October 5
FRANK BRAMBLETT
Painter
Lecture

October 5
CECIL BALMOND
Deputy Chairman, Arup; Paul Philippe Cret Practice Professor of Architecture, PennDesign
Architecture Bits / NLSO Annual Conference Opening Lecture

October 5-6
ARCHITECTURE BITS
NLSO Annual Conference

October 9
MICHAEL JAKOB
Professor of the History and Theory of Landscape, University of Geneva, Switzerland
“Faux Mountains”

October 12
PAUL BYARD
Platt Byard Dovell White, Architects LLP, New York, NY
“Starting Fresh: Architecture and Historic Preservation in the 21st Century”

October 12
JUSTINE KURLAND
Photographer
Lecture

October 16
WANGARI MAATHAI
Founder, Kenyan Green Belt Movement, Winner 2004 Nobel Peace Prize
“Sustainable Development, Democracy and Peace: A Critical Link”

October 16-17
Institute for Urban Research
GROWING GREENER CITIES
Symposium on Urban Environmental Issues in the 21st Century
Featured speaker: Nobel Laureate Dr. WANGARI MAATHAI

October 19
ROBIN THOMPSON
Bartlett School, University College London
"Working with Ken Livingston to create a greater London"
October 23
VERA LUTTER
Photographer

October 26
JOHN G. DAVIES
Executive Director, Baton Rouge Area Foundation
“The Role of Foundations in Katrina Recovery”

October 30
CATHERINE MOSBACH
Landscape architect, Paris, France
“Landscape: A Product of Production”

October 31
JACKIE TILESTON
Real World

November 2
CARLOS BASUALDO
Curator of Contemporary Art, Philadelphia Museum of Art
“Tropicália: A Revolution in Brazilian Culture”

November 2
TOYO ITO
Toyo Ito and Associates, Architects
“Emerging Grid”

November 4-5
GENERATIVE COMPONENTS II
N_LSO Design Charette

November 6
WINKA DUBBLEDAM
Archi-Tectonics; Practice Professor of Architecture, PennDesign
“Works”

November 10
JOHN WATERS
Film maker, photographer
“The World of Trash”

November 13
DAMIAN LOEB
Painter

November 13
ENCOUNTERS AND ENGAGEMENTS:
INTERNATIONAL STUDIES IN ARCHITECTURE /
“Conversations” 1
Moderator: Detlef Mertins
Chair, Architecture, PennDesign

A series providing open discussion forum for PennDesign faculty, students and guests that seeks to frame topical disciplinary questions.

November 21
KOENRAAD VAN BALEN
Professor and Program Coordinator, Katholieke Universiteit Leuven, Civil Engineering Department and Raymond Lemaire International Center for Conservation
“Inspired by Heritage, Contributing to Sustainable Construction”

November 30
STIG ANDERSSON
Landscape architect, Copenhagen, Denmark
“Wunderstadt”

December 4
NUR AKIN
Faculty of Architecture, Istanbul Technical University
“Historic Preservation in Turkey”

January 11
RICHARD LIEBHART
Lecturer, University of North Carolina at Chapel Hill
"The Tomb Chamber in Tumulus MM at Gordion, Turkey: Studying and Preserving the Oldest Standing Wooden Building in the World"

January 11
RUTHERFORD H. PLATT
Professor of Geography, Director, Ecological Cities Project
University of Massachusetts
“The Humane Metropolis: Holly Whyte Lives On”

January 17
CARLOS BASUALDO
Curator of Contemporary Art
Philadelphia Museum of Art
“Tropicália: A Revolution in Brazilian Culture”

January 22
NIKKI LEE
Photographer

January 29
EILEEN NEFF
Photographer, Visual Artist

Senior Critic, PennDesign

January 29
DAVID ERDMAN
MARCELYN GOW
Principals, SERVO; Lecturers, UCLA, Architecture
“Architecture in Formation”

January 30
JANE GOLDEN
“Real World” talk

February 1
JAMES CORNER
Professor and Chair of Landscape Architecture, PennDesign; Field Operations, NY
“Thickety Thick”

February 2 to Friday, March 30
The Evolving Drawing: Visual Studies at the University of Pennsylvania

Monday, February 5
MARNIE WEBER
Multi-Media Artist
5pm, B3 Meyerson

Monday, February 5
MAJORA CARTER
Founder and Executive Director, Sustainable South Bronx
“Sustainable South Bronx: Design is Deliberate”

February 8
CHRISTOPHE GIROT
Chair, Landscape Architecture, ETH Zurich
“The Architecture of Landscapes”

February 8
INGRID SCHAFFNER
Senior Curator, Institute of Contemporary Art, Penn and Senior Critic PennDesign MFA program
"Cut-Up: Collage in Contemporary Art"

February 12
SHERMAN FLEMING
Performance Artist, Visual Artist

February 15
LINDSAY BREMNER
Chair of Architecture, Tyler School of Art, Temple University
“Contemporary City Making: Ruination, Nomadism and Fear”

February 19
WILLIAM ROPER
KEN SNYDER
Orton Family Foundation, Manchester Village, VT
“Using Technology for Civic Engagement and Better Community Planning”

February 22
LYNN MARGULIS
Distinguished University Professor in the Geosciences and Microbiology
University of Massachusetts
The Annual Ian L. McHarg Lecture
“Message from McHarg: Dwelling in Nature and the Lost Tapes”

February 26
JUDITH SHEA
Sculptor, Senior Critic PennDesign

February 26
JEFF CODY
Getty Conservation Institute
“Challenges of Urban Conservation in China’s Pearl River Delta”

February 27
KLAUS OTTMANN
Independent Curator

March 8
DAVID LEATHERBARROW
Professor of Architecture, PennDesign
ACSA Keynote lecture
6pm, Loews Philadelphia Hotel Millennium Room
Open to registered ACSA conference participants only.
Co-Sponsors: University of Pennsylvania, Department of Architecture and ACSA
Saturday, March 10
RICHARD ROGERS
Richard Rogers Partnership, London
ACSA Keynote lecture

March 12

"CONVERSATIONS" 1: DESIGN-RESEARCH

Moderator: Helene Furján, Assistant Professor of Architecture PennDesign
Speakers:
Sean Lally, Principal, Weathers; Caudill Visiting Assistant Professor, School of Architecture, Rice University; Director, Energies and Matter Lab
Eran Neumann, Principal, OSA; Lecturer, Faculty of Architecture and Town Planning, Technion and Director, T_CODE at the Technion
Theodore Spyropoulos, Director, Minimaforms; Co-director, DRL, Architectural Association
Aaron Sprecher, Principal, OSA; Assistant Professor, School of Architecture, Syracuse University and Director, LIFE Lab_Syracuse

March 15
ALEXI WORTH
Painter
Senior Critic, PennDesign MFA Program

March 15
EMILY WADHAMS
Vice President, National Policy, National Trust for Historic Preservation, Washington, DC
"Making Community Preservation and Planning Work"

March 19
CATHERINE MURPHY
Painter, Senior Critic, Yale School of Art

March 22
MICHAEL LUCERO
Sculptor, Artist-in-Residence, Emily and Jerry Spiegel Fund/Contemporary Culture and Visual Arts

March 22
NIKOLAUS HIRSCH
Wandel Hoefer Lorch & Hirsch, Frankfurt, Germany; Unit Master, Architectural Association; Co-director, United Nations Plaza Institute
"Material Time"

March 26
DANIEL BLUESTONE
Associate Professor, Department of Architectural History
Director, Historic Preservation Program, University of Virginia
"Architecture and Banality in the Shadow of Jefferson"

March 29
DARSIE ALEXANDER
Senior Curator, Contemporary, Baltimore Museum of Art
Senior Critic, PennDesign
"Once More with Feeling: Reuse and Refuse in The Art of Franz West"

March 29
UDO WEILACHER
Landscape architect and professor, University of Hanover, Germany
"The Urban Colors of Nature: New Tendencies in European Landscape Architecture"

March 30-31
Unspoken Borders Conference
Keynote speakers
Friday, March 30
MITCHELL SILVER
Planning Director, City of Raleigh, NC
Saturday, March 31
WALTER HOOD
Landscape Architect, University of California, Berkeley

March 30-31
Evasions of Power Symposium
Moderators:
Srdjan Weiss, Lecturer, Department of Architecture
Aaron Levy, Slought Foundation
Katherine Carl, Drawing Center

April 2
TEDDY CRUZ
Principal, Estudio Teddy Cruz, San Diego; Associate Professor, Public Culture and Urbanism, University of California, San Diego
"Practices of Encroachment"

April 5
NSO LEAD RESEARCHERS REPORT
Research Fellows of 05/06 presentations

April 9
JOSHUA PRINCE-RAMUS
Principal, REX-NY

“The Autonomous Language of Architecture is Doomed, and Why Architecture School Should Teach More About Contracts”

April 10
HAL FOSTER
Critic in Residence, Emily and Jerry Spiegel Fund/Contemporary Culture and Visual Arts; Professor and Chair of Art and Archaeology, Princeton University
April 14
AMERICAN PLANNING ASSOCIATION NATIONAL
FUMIHIKO MAKI
Maki and Associates, Tokyo
“Designing Complex Forms: Recent Work”

April 19
Kongjian Yu
Landscape architect and professor, Beijing University
“The Art of Survival: Discovering Landscape Architecture”

EXHIBITIONS
June 29th - September 24th, 2006
"Crafting a Modern World: The Architecture and Design of Antonin and Noemi Raymond"

2007-09

September 6
JOSEPH DUCKWORTH
President, Arcadia Land Company
WITOLD RYBCZYNSKI
Hon. FAIA, Hon. ASLA; Martin & Margy Meyerson Professor of Urbanism, PennDesign; Professor, Wharton School
"How a Cornfield became New Daleville"

September 13
RICHARD GLUCKMAN
Gluckman Mayner Architects, New York, NY
"Gluckman Mayner Architects: Work"
Lecture to coincide with the opening of Perleman Hall, for the Philadelphia Museum of Art

September 17
ALEXANDER GARVIN
Professor, Yale University; President, Alex Garvin Associates
"Haussmann and the 19th Century City"

September 20
ILIJA LALOSEVIC
Assistant Professor, Faculty of Architecture, University of Montenegro
"Venetian Period Fortifications of Boka Kotorska"

September 24
LISA SARFATI
Photographer
5pm, B3 Meyerson

September 24
DAVID MEYERS
Project Specialist, The Getty Conservation Institute
"The Getty Conservation Institute: Project at the Valley of the Queens, Egypt"

September 24 – Wed Sep 26
A U R A
LARS SPUYBROEK, NOX; Ventulett Distinguished Chair in Architectural Design, Georgia Institute of Technology
WILLIAM MACDONALD, kol/mac studio; Chairperson of Graduate Architecture, Pratt Institute
PRESTON SCOTT COHEN, Preston Scott Cohen Inc.; Gerald M. McCue Professor of Architecture and Program Director, Harvard GSD
HERNAN DIAZ ALONSO, Xefirotarch; Adjunct Assistant Professor, Columbia
FERDA KOLATAN, SU11
DAVID RUY, Ruy Klein Architecture
ALI RAHIM, Contemporary Architecture Practice; Associate Professor, PennDesign

September 26
ALEXANDER ROBINSON
Designer, SWA Group, Los Angeles
LIAT MARGOLIS
Landscape Architect, Hargreaves Associates
"Living Systems"

September 27
CORBETT LYON
Lyons Architecture; Professor and Professional Fellow, University of Melbourne
"Scratching the Surface: The Work of Lyons"

October 1
KIM JONES
Visual Artist
5pm, B3 Meyerson
Sponsor: Fine Arts

October 2
ERAN NEUMAN
OSA (Open Space Architecture); Director, T_CODE (Technion's Computer Oriented Design)
"We Have Always Been Digital"

October 3
SINA NAJAFI
Editor-in-Chief, Cabinet Magazine; Editorial Director, Cabinet Books
"The Evolution of Fake Estates"

October 4
CHRIS REED
Principal, Stoss Landscape Urbanism, Boston, MA
"Performance Practices"

October 8
WILLIAM BRAHAM
Associate Professor and Associate Chair of Architecture, PennDesign

MUSCOE MARTIN
M2 Architecture
The Don Prowler Lecture with roundtable discussion "Net Zero: Climate Neutrality at the University of Pennsylvania"

October 10
LINDA TAALMAN
ALAN KOCH
Taalman Koch Architecture, Los Angeles
"The iT Factor"

October 15
MICHELE LAMPRAKOS
Shalom Baranes Associates, Washington, DC
"Building a World Heritage City: Sana'a, Yemen""

October 18
ALBERT POPE
Associate Professor, Rice University
"Tomorrow"

October 19, 2007 – February 1, 2008
EXHIBITION: Lawrence Halprin: The Choreography of Gardens

October 20
COLLOQUIUM: "Restoring Richardson's Trinity: Art, Architecture and Preservation of an American Masterpiece"

October 22
JOHN KELLY
Performance artist

October 24
WERNER HERZOG
Film maker

October 25
RICHARD SERRA
Sculptor

Thu, Nov 1
LAURIE OLIN
Partner, Olin Partnership, Philadelphia
Practice Professor of Landscape Architecture, PennDesign
"Halprin, Nature and Place"

Mon, Nov 5
JONATHAN ROSE
WHITNEY FOUTZ
Jonathan Rose Companies, New York
"Revitalizing Cities with Green Principles"

Thu, Nov 8
DAVID SCHAFER
Sound Artist
November 8
CONVERSATIONS 2.1: landscape, surface, architecture
School of Design Debate
Participants TBA

November12
PANEL: "Land Use, Preservation, and Managing Growth out in the Field"
HARVEY C. CARTER, JR.
Attorney, Corinth, VT
SUSAN CRAFT
Director, New Jersey Farmland Preservation Program, Department of Agriculture, Trenton, NJ
CHRIS MILLER
President, Piedmont Environmental Council, Warrenton, VA

November 14
ROY McMAKIN
Sculptor

November 15
RONI HORN
Sculptor, visual artist

November 15
PAOLO BURGI
Landscape architect, Camorino, Switzerland
"From the perimeter to the horizon – real limits – imaginary limits"

November 19
JESSE REISER
Reiser + Umemoto, New York, NY;
Associate Professor, Princeton University
"From Outside-In to Inside-Out"

November 29
RICHARD LONGSTRETH
Professor of American Civilization and Director of the Graduate Program in Historic Preservation,

George Washington University, Washington, DC
"Modernism without Fanfare: The Quiet Legacy of Thaddeus Longstreth"

November 29
MARK GREENWOLD
Painter

January 17
School of Design Interdepartmental Faculty Debate
CONVERSATIONS 2.1: Surface and Depth: Between Architecture & Landscape
Moderators: Helene Furjan and Karen M'Closkey
Jan 20 – May 4

January 24
Roundtable:
Terms of Engagement: Roundtables on Architectural Education
Convened by: DETLEF MERTINS
Professor and Chair of Architecture, PennDesign
Event held in conjunction with
January 22 – 31
Exhibition: WORK WORK WORK from the Architecture Studios at PennDesign

January 24
DOVE BRADSHAW
Sculptor/Visual Artist

January 30
BILLIE TSIEN
TOD WILLIAMS
Tod Williams Billie Tsien Architects, New York
EwingCole Lecture
"Resistance"

February 4
EMILY COOPERMAN, MS'93, PhD'99
Principal, Arch Consulting, Philadelphia
"Beth Sholom: Frank Lloyd Wright's Landmark Synagogue"

February 7
THOMAS BALSLEY
Thomas Balsley and Associates, New York
"Urban Miracles: a new approach to designing the public realm"

February 7
TALK 20
6pm, Institute of Contemporary Art
Sponsor: student organized event, PennDesign

February 14
JOHANNA DRUCKER
Spiegel Resident; writer and book artist;
Robertson Professor of Media Studies, University of Virginia
"Combo Meals: Why/How This Book Now?"

February 18
FERNANDO AND HUMBERTO CAMPANA
Campana Design, Sao Paolo, Brazil
Inaugural Integrated Product Design (IPD) Lecture
"Deconstructing Campanas"

February 21
MARTHA MADIGAN
Photographer

February 21
MABEL WILSON
Adjunct Assistant Professor of Urban Planning, Columbia Graduate School of Architecture Planning and Preservation
"Time/Space Pressure: The Electronic Image of Architecture"

February 25
SANDRO MARPILLERO
LINDA POLLAK
Marpillero Pollak Architects, New York
"Quasi-Objects"

February 29
VITO ACCONCI *
Acconci Studio
"From Word to Action to Architecture"
5pm, B1 Meyerson
Sponsors: Architecture, Department of Art History, Slought Foundation

March 3
RYAN TRECARTIN
Sculptor/Video Artist

March 6
KATE CLARK
Kate Clark Associates
"The Public Value of Heritage"

March 17
A. ELENA CHAROLA
Scientific Advisor, World Monuments Fund, Lisbon, Portugal
"Current Conservation in Portugal"

March 20
TOM NOZKOWSKI
Painter

March 20
WERNER SOBEK * (wrist band tickets needed for entry)
Werner Sobek International Engineering & Design; Director, Institute for Lightweight Structures and Conceptual Design (ILEK)
Inaugural Sheldon Fox/Kohn Pederson Fox Lecture
"High-Tech Ecology"

March 21-27
Exhibition:
Fall 2007 London Studio Student Exhibition
Homa Farjadi, Practice Professor of Architecture
Upper Gallery, Meyerson

March 24
DIANA HOROWITZ
Painter
5pm, B3 Meyerson
Sponsor: Fine Arts

March 24
Film Screening:
"Learning from Bob & Denise"
A documentary on the Architecture and Ideas of Venturi and Scott Brown
Produced and directed by James Venturi, Light from Light Films, New York

March 31
MELINDA MOULTON
CEO, Main Street Landing, Inc. Burlington, VT
"Developing Differently: LEED-Design, Social Space, and Still Making Lots of Money"

April 3
GEORGE HARGREAVES
Hargreaves Associates, San Francisco, Cambridge, New York, London
The Annual Ian L McHarg Lecture
"Recent Work"

April 3 & 4
NSO Annual Conference:
NONLINEAR FABRICATION

April 4 & 5
Conference:
UNSPOKEN BORDERS
Sustainable Communities & Professions
Keynote speaker: Marshall Purnell, President of AIA
Topics include: cultural responsibility, sustainable development and design
Sponsor: Black Student Alliance, PennDesign
Thursday, Apr 10
MARK GOULTHORPE
dECOi Atelier; Associate Professor of Architecture, MIT
"Hox Aesthetics"

April 11
ANNE MOUDON
University of Washington
"Urban Health and Urban Design"
12noon, Colonial Penn Center Auditorium, 3641 Locust Walk
For more information: www.upenn.edu/ldi
Sponsors: (Amy Hillier) Leonard Davis Institute of Health Economics, Penn Institute for Urban Research, and Dean's Office, PennDesign

April 17
SYLVIA LAVIN
Professor, UCLA Department of Architecture and Urban Design
"Recent Work"

April 21
JENNY SAVILLE
Spiegel Resident, Painter

April 21
Book launch:
VIA: OCCUPATIONS
Presentation, reception and book sales

April 28
GLENN BOORNAZIAN
President, Integrated Conservation Resources, ICR
"Conserving Angkor"

Exhibition:

Back on the Map: Revisiting the New York State
Pavilion at the 1964/65 World's Fair
Queens Museum of Art, NY
Curated by the Architectural Conservation Laboratory,
PennDesign

2008-09

September 4-October 24
EXHIBITION
Through You: Photography Selections from the Martin Z. Margulies Collection

September 15
FRED WISEMAN
Documentary Filmmaker, Zapporah Films, Spiegel Resident

September 18
BOOK LAUNCH
VIA: OCCUPATION

September 22
DREAD SCOTT
Lecture

September 25
ANDY ALTMAN
Director of Commerce, Deputy Mayor for Planning, City of Philadelphia
PAUL FARMER
Executive Director, American Planning Association
"Replanning & Rebuilding a Great American City"

October1-12
EXHIBITION
Landscape Architecture Student & Faculty Work
Lower Gallery
Held in conjunction with the ASLA annual meeting in Philadelphia

October 2
KATHRYN GUSTAFSON
Director, Gustafson Guthrie Nichol Ltd, Seattle
"Landscape Design in a Changing Environment"

October 2
BARRY BERGDOLL *
The Philip Johnson Chief Curator of Architecture and Design, The Museum of Modern Art
"Delivered Home: Reflections on prefabrication and digital fabrication in light of the current MOMA exhibition 'Home Delivery: Fabricating the Modern Dwelling'"

October 11
SYMPOSIUM:
Architecture and Technology:
Remembering Professor Peter McCleary's 43 Years at Penn"

MARILYN TAYLOR
Dean and Paley Professor, PennDesign
JERRY SWEENEY
President & CEO, Brandywine Realty Trust
"City Building in the 21st Century"

October 16
JOÃO NUNES
Landscape Architect, PROAP, Lisbon, Portugal
"New Landscapes"

October 16-22
EXHIBITION: DESIGN PHILADELPHIA
CHARLES BURNS
Artist, Spiegel Resident
Lecture

MARK ALAN HUGHES
PhD'86, Director of Sustainability, City of Philadelphia
SANDY WIGGINS
LEED AP; Principal, Consilience LLC; Chair, e3 Bank
"Sustainable Philadelphia: The Road Ahead"

November 6, 7 & 8
INTERNATIONAL SYMPOSIUM & EXHIBITION
Re-Imagining Cities: Urban Design After the Age of Oil
Samuel Babatunde Agbola ; Rohit T. Aggarwala Andrew Altman; Diana Balmori ; Tridib Banerjee ; Jonathan Barnett ; Timothy Beatley ; Eugenie L. Birch ; William W. Braham FAIA ; Jason Bregman ; Hillary Brown ; Paul R. Brown ; Thomas Campanella ; Matthew Carmona ; Sudeshna Chatterjee ; Neelkanth H. Chhaya ; Clive Doucet ; Bill Dunster ; Fred Dust ; Ann Forsyth ; Harrison Fraker, Jr., FAIA; Gita Goven ; Martin Haas ; Gary Hack ; Robert Harris ; Peter Head ; Jennifer Henry ; James Higgins ; Lance Hosey ; Mark Alan Hughes ; Douglas Kelbaugh , FAIA ; Stephen Kieran ; Elizabeth Kolbert ; Elizabeth Harrison Kubany ; Alison Kwok ; David Leatherbarrow ; Nancy Levinson ; Elizabeth Macdonald ; Musco Martin, AIA, LEED; Jonathan Marvel, AIA ; Adrian Masson ; Ken McCown ; William J. Mitchell ; Dinesh Mohan ; Adil Najam ; Taner Oc ; Laurie D. Olin ; David Orr ; Neal Peirce ; Himanshu Parikh ; Rodrigo Pérez de

Arce ; Jose Picciotto ; Jonas Rabinovitch ; K.T. Ravindran ; William Rees ; Andrew Revkin ; Judith Rodin ; Witold Rybczynski ; Inga Saffron ; Robert Socolow ; Barbara Southworth ; Alex Steffen ; Frederick Steiner ; Marilyn Jordan Taylor ; Karen Van Lengen ; Susan Wachter ; Lin Wang ; Charles Waldheim ; Alexandros E. Washburn , AIA; Marion Weiss ; Jane Wolff ; Ding Wowo ; Jiang Wu; Richard Saul Wurman ; Robert D. Yaro ; Norbert W. Young, Jr. Kongjian Yu ;

November 10
MICHAEL HENRY
Principal Engineer/Architect, Watson & Henry Associates
Adjunct Professor of Architecture, Univ. of Pennsylvania
"Preventive Conservation: Maintaining Sustainability in Buildings Old and New"

November 10-21 EXHIBITION
Nov 14 COLLOQUIUM
The Dresser Trunk Project and Places of Refuge

November 13
JEANNE GANG
Studio/Gang/Architects, Chicago
"Recent Work"

November 17
CHARLES WALDHEIM
MArch'89, University of Toronto
"Planning, Ecology, and the Emergence of Landscape"

November 18
WILLIAM ALSOP *
SMC ALSOP, London
"Recent Work"

November 24
FRANCESCO SIRAVO
The Aga Khan Trust for Culture
"An Integrated Approach to Conservation: The Case of Darb al-Ahmar, Cairo"

January 22
AMY STEIN
Photographer

January 26
SHELLEY POTICHA
Reconnecting America
ROBERT DUNPHY
The Urban Land Institute
"Philadelphia Conversations 2009: Transit-oriented Development and the Future of Urban Transit"

January 29
KARYN OLIVIER
Artist

January 29
RICHARD MACKAY
Partner, Godden Mackay Logan, Sydney, Australia
Guest Scholar, Getty Conservation Institute
"Critical Success Factors for Sustainable Heritage Management"

January 29
JÜERGEN MAYER *
J. Mayer H. Architects, Berlin, Germany
"Recent Work"

February 2
JEFFREY COHEN
BArch'74, PhD'91; Senior Lecturer, Growth and Structure of Cities Program
"Downtowns Sideways: Panoramic Streetscapes of the Emerging Modern City"

February 5
JAMES DUESING
Animator

February 12
PATTI SMITH / DAVID JOSELIT *
Performance and discussion

February 12
GEORGES DESCOMBES
Architect/Landscape Architect, University of Geneva, Switzerland
"Superpositions"

February 17
WILLIAM MORRISH
Professor of Architecture, University of Virginia
The Annual Ian L Mc Harg Lecture

"After the Storm, Cities in the Second Age of Modernity"

February 18
STEFAN BEHNISCH *
Behnisch Architekten, Stuttgart, Germany
"Recent Work"

February 19
GEORGE GALSTER
Wayne State University
JOHN KROMER
FELS Institute of Government
"Philadelphia Conversations 2009:
Gentrification Dangers and Neighborhood Change Opportunities"

March 2
DANIEL MAUDLIN
Architectural Historian, School of Architecture & Design,
University of Plymouth, UK
"The Legend of Brigadoon: Architecture, Identity, and Choice in Scotland"

INGA SAFFRON
The Philadelphia Inquirer
KENNETH GREENBERG
Greenberg Consulting, New York
"Philadelphia Conversations 2009: Urban Design and the Remaking of Cities

March16
SIGI MOESLINGER / MASAMICHI UDAGAWA
Antenna Design, New York
"Recent Work"

March18
BARKLEY HENDRICKS
Painter

April 3 & 4
Conference: UNSPOKEN BORDERS 2009
THE ECOLOGIES OF INEQUALITY *and the Future of Design in Race + Space + Politics*