

Institution: The Pennsylvania State University
Academic Unit: Department of Architecture, The Stuckeman School of
Architecture and Landscape Architecture
Administrator: Scott Wing, Interim Department Head
Last Accreditation Visit: Spring 2008
Date: November 30, 2011

Part Two: Narrative Report

Note: Many of the actions instituted by the Department of Architecture to address causes of concern from the 2008 Visiting Team Report are ongoing and were noted in last year's narrative report. These ongoing efforts are grouped under the heading of "Continuing Actions." New efforts commencing in the 2010-11 academic year (and the current academic year 2011-12) are noted under "New Actions." Additional information about the architecture program is reported following the responses.

Response to Visiting Team Report "Section 1.4 Conditions Not Met"

There were no "conditions not met"

Response to Visiting Team Report Conditions "Section 1.5 Causes for Concern"

There were four student performance criteria in the Visiting Team Report dated March 5, 2008 listed as "causes of concern":

Critical Thinking Skills

(Condition 13.2; Corresponds to 2009 Conditions A2, Design Thinking Skills)

Research Skills

(Condition 13.4; Corresponds to 2009 Conditions A5, Investigative Skills)

Site Conditions

(Condition 13.17; Corresponds to 2009 Conditions B4, Site Design)

Comprehensive Design

(Condition 13.28; Corresponds to 2009 Conditions B6, Comprehensive Design)

A. Critical Thinking Skills

Visiting Team Report:

The team finds this criterion to be met, though there is room for improvement. A clear studio rigor that reinforces critically inquisitive design work is supplemented by a series of history and theory courses that are most well represented by Arch 311w. This mandatory fourth-year advanced theory course provides a comprehensive overview of seminal texts and demands critical responses of those works verbally and in written form (sic) the students. The team strongly recommends aligning a more integrated theoretical curriculum with both the history and design curriculum.

Continuing Actions:

1. Arch 311w (a writing-intensive theory course), formerly positioned in fourth-year, was moved to third-year. By locating the theory class one year earlier in the curriculum, it is better aligned with the design

curriculum content of third-year design courses (Arch 331 and 332). A portion of course content has been adjusted to promote the integration and impact of theoretical positions in affecting design choices. By offering the course in fall and spring semesters, we have maintained low enrollment in this class (20-22 students) to better enable greater student participation and a more extensive writing experience. This third-year course follows a two-course architecture history sequence in first-year and an introductory theory course required for second-year students, Arch 210 (see below for modifications in Arch 210).

2. Beginning in the fall semester of 2010, Arch 210, the introductory theory course has been substantially altered to address the need for a more integrated and focused course for architecture majors only. Formerly, the course served B.Arch. majors as well as fulfilling general education requirements for architectural engineering students and other students throughout the university. We now offer two distinct courses for these two populations, allowing the Arch 210 for majors to link more directly to the design studio curriculum (Arch 100 is now the new course number intended for the non-major students and is offered both online and in-person).
3. Professor Denise Costanzo was hired in multi-year fixed term position in 2009 with a teaching appointment for Arch 210 and Arch 100, as well as Arch 311w and first-year studio design. Professor Costanzo holds a PhD in Architectural History and combines teaching in theory and studio design. All faculty members teaching the theory courses in the required curriculum also are assigned to teach design studio. Three new faculty members teaching architectural theory and history also teach in the design studio sequence. We believe these dual teaching assignments facilitate the NAAB visiting team's proposal to more fully integrate the theory curriculum with the design curriculum.
4. Professor James Cooper was hired in a tenure-track faculty position in fall 2008. Professor Cooper, PhD in architectural history, has greatly enhanced the Arch 122 Visual Communications course to emphasize the use of architectural precedent (in addition to hand-drawing skills) to support design studio in first year. While the primary curricular objective of this course is to teach drawing representation conventions, the attention to historical precedents presents a new supplement to the material witnessed in the 2008 NAAB visit.
5. The Department of Architecture now indicates the primary evidence for 2009 Student Performance Criteria for A2 Design Thinking Skills to be located in Arch 311w and Arch 491 (fifth-year thesis). Other year-level design courses, Arch 480 Technical systems Integration, and Arch 499B

Architectural Analysis and Arch 499C Urban Studies (Rome) also provide evidence of Design Thinking Skills.

New Actions:

1. Lecture series topics and presentations have focused on architectural theory over the past three semesters bringing over 10 national and internationally leading theoreticians including most recently David Leatherbarrow, Joan Ockman and Peggy Deamer as well as practitioners actively employing theory in their practice. Recent lecture series topics including “Who Owns Design” and have sought to better integrate theoretical curriculum with design practice.

B. Research Skills

Visiting Team Report:

Minimally met. The history-theory curriculum exposes students to appropriate skills and exercises for research and the writing intensive components are administered admirably. The research components / books are a continual sub-text to many of the design studios throughout the curriculum. While there are exceptional examples of research documentation, many research documents recording design projects tend to rely heavily on simple notated graphic documentation and diagramming even at the thesis studio level. The thesis sequence would benefit with the inclusion of a research methodology module and a developed research component that supports theoretical aspirations.

Continuing Actions:

1. A newly-revised course in introductory architectural theory dedicated for B.Arch majors in second-year, Arch 210, is now taken by all students; It includes a module to facilitate the development of research skills. Similarly, Arch 311w, a writing intensive course for third-year students now instructs on research methodology. Within the fifth-year studio design thesis course (Arch 491/492), several research methods presentations guiding student research are now better regularized and integrated into the studio course. The majority of resulting work may be better described as data and information documentation and re-formulation than research in the scientific sense of new knowledge gained or discovered. This characterization is likely true of most architectural “research” performed at an undergraduate level.
2. Three recently hired faculty members have each received their PhD’s in architectural theory or architectural history. The addition of the new faculty greatly expands our ability to introduce and research skills in stand alone theory and drawing courses as well as reinforce research in studio design courses (each of the aforementioned faculty teach in the first three years of the architectural design studio sequence). Professor Peter Aeschbacher, with a joint appointment in landscape architecture

and architecture has led the inclusion of a more formalized research methodology module in fifth-year thesis this past year (as suggested by the 2008 NAAB report). He has also integrated a similar research methods module into Arch 311w.

3. The Department of Architecture locates the primary evidence for 2009 Student Performance Criteria for A5 Investigative Skills in Arch 311w and Arch 491/492. The architecture history sequence Arth 201/202, Arch 210 and the architectural analysis class in Rome Arch 499B, provide evidence of investigative skills.

C. Site Conditions

Visiting Team Report:

This is minimally met; the team has concern about the integration of site within the observed projects on display. An understanding of site manipulation and its implications on architectural drawings was not strongly evident in work samples. The team would recommend considering collaboration with the Landscape Architecture department.

Continuing Actions:

1. Formalized collaboration with Landscape Architecture faculty and students is now underway during the fourth-year studio sequence in Rome and University Park locations.

Commencing in fall 2010, students in Architecture and Landscape Architecture studying in Rome worked in collaborative teams (including Italian students) to design buildings and landscapes as part of the twice-annual Thorp Competition. The competition requires fourth-year students in each department to team with classmates from the complementary department in a weeklong project. The competition now occurs at the start of the fall and spring semesters each year (students rotate into the Rome program, one-half in fall, one-half in spring). The Thorp Competition enables our program to utilize the expertise of the landscape architecture program as envisioned by the 2008 NAAB Visiting Team Report.

When students are in residence at our University Park location, students in the fourth-year studio (Arch 431/432), students work in teams engaged in urban design programs. Recent projects include design for the City of Toronto as part of the Don-Lands waterfront development masterplanned by Michael Van Valkenburgh, as well as projects in Washington, Baltimore and Philadelphia. Students are in collaborative architecture/landscape architecture teams under the direction of a jointly appointed faculty member.

2. The Hajjar Competition, a one-week competition for all third-year design students (Arch 331/332) requires the design of a residence. The competition now situates the project site on a hillside enabling students to demonstrate competency in contouring earth for structure and hydrology and exhibiting technical drawing accuracy in describing topography.
3. A series of technical drawing exercises was added to Arch 204, the introductory materials and construction course subsequent to the past accreditation visit. The exercises introduce students to the conventions of describing landscape and architecture constructions. The sites for the small design projects are located on a hillside necessitating the re-grading of the site to allow for hydrological flow, structural retaining of earth through site and building walls, and vehicular and pedestrian access. The demonstration of drawing conventions showing topographical reconfiguration is required. The intention of the drawings exercises is to better prepare students to manipulate sites of a larger scale in third-year design studio projects.
4. The Department of Architecture situates the primary evidence for 2009 Student Performance Criteria for B4 Site Design to be located in Arch 331 and 332. The second year design courses Arch 231/232 and the material and construction courses Arch 203/204 also demonstrate evidence of Site Design.

New Actions:

1. The relocation of Penn State's Landscape Architecture study abroad program from Rome to Bonn starting in spring 2012 will result in the collaborative studios and competitions to be centered at our University Park campus.
2. The newly-appointed Chair of Design Innovation in the Stuckeman School, Ray Gastil, has been a leader in urban design both in the city planning agencies in New York City and Seattle and as director of the Van Allen Institute. Starting in fall 2011, Professor Gastil is teaching urban design studios to interdisciplinary teams of architecture and landscape architecture students. For spring 2012 students will be engaged in a multi-university design project in New York City organized by Mary Miss and a research project studying the affect of campuses on urban design.

D. Comprehensive Design

Visiting Team Report:

Minimally met. The comprehensive design experience has been developed through two parts of the curriculum, specifically, the third-year design studio experience in a controlled format and the thesis project in the fifth year. While there is a concerted

effort to deliver the comprehensive project factors (structural and environmental systems, building envelope systems, life safety provisions, wall sections and building assemblies, and the principles of sustainability) through controlled exercises during the third year there is little evidence that there are similar specific exercises during the fifth year, except through some of the course content. Put another way, the third year concentrates on certain aspects of comprehensive building codes, zoning, site, tax increments, etc. while the various thesis projects, with their diverse interests and goals, failed to collectively illustrate each of the factors outlined as comprehensive criteria. It may prove beneficial to add comprehensive criteria to the fourth year or devise a more explicit process of illustrating the comprehensive project factors during the thesis year.

Continuing Actions:

1. For the 2010-11 academic year the primary evidence for 2009 Student Performance Criteria for B6 Comprehensive Design (consisting of criteria A2, A4, A5, A8, A9, B2, B3, B4, B5, B8, B9) is located in Arch 491/492 (Fifth-year Thesis Studio) and Arch 480 (Building Systems Integration) with supporting evidence in Arch 331/332, third-year studio (See below under “New Actions” for changes starting in 2011-12).

For the past two academic years, we have taken a dual approach in addressing the concerns of the 2008 NAAB team. First, in third-year design studio, we have focused greater attention on building systems integration through curricular adjustments stressing environmentally-conscious, performance-based design and teaching methods prioritizing architectural engineering design input early in the process. Secondly, we have augmented fifth-year thesis design studio with greater technical support from the professional practice and building systems courses offered concurrently.

2. Commencing in spring 2010, the third-year design studio (Arch 332) curriculum now emphasizes building systems integration and sustainable building practices. Performance-based sustainability software evaluation tools (Ecotect) and Revit is employed across the studio level to heighten awareness and representation of design responses to environmental forces and building systems. At Penn State engineering faculty outside of our department teach environmental systems, lighting, structures (and other building systems); We continue to look for methods of encouraging more integrated teaching methods. We have made improvements through greater engagement of the engineering faculty through design critiques early in the design phases. Architectural faculty with stronger interests in building systems integration are now guiding the third-year studio work and we have hired an adjunct faculty member and local practitioner expressly to support the comprehensive design integration goals.

The faculty committee CECA (Committee for Environmentally-Conscious Architecture) has developed new curricular approaches to meeting some of the student performance criteria (specifically 2009 SPC B3 Sustainability and B8 Environmental Systems) involving Comprehensive Design.

In fall 2010, the Department of Architecture hosted a conference on building integrated wind power, a research interest of several faculty members and a technology supported by Penn State as a purchaser of energy. The third-year design studio, Arch 331, utilized the focus of this research in the design of a museum in Erie, PA.

3. Fifth-year faculty working in close alignment with Arch 480 (Building Systems Integration) coursework have instituted greater explicit demonstration of comprehensive design factors (taught in the spring semester, the course runs concurrently to the second-half of the thesis studio). We believe the specific exercises currently being executed as part of Arch 480 can be more clearly defined and delineated in the thesis graphic representations and text. It is our analysis over the past two years that thesis projects in 2009 and 2010 demonstrated modest improvements in the design and display of comprehensive design.
4. Arch 451, Professional Practice now includes modules on legal restrictions, zoning and building codes targeted for application in each student's individual thesis design during the initial design phases in the fall semester. Professor Bob Holland, a 25-year project manager for the Disney Corporation is now the instructor for this course. His considerable experience in the legal constraints of design is now directly employed in the fifth-year projects.
5. The Department of Architecture lecture series has expanded over the past two and one-half years allowing for numerous lectures with themes of performance-based design, building systems integration and varied sustainability interests. Over 40 lectures and workshops have been offered that include content identified in Comprehensive Design.
6. The Department recently received the highest award for the 2010 AIA Building Information Modeling Award "Integrating BIM in Academia" and the 2011 NCARB Integration of Education and Practice Honorable Mention award. The awards are in recognition of the high quality and unique interdisciplinary mix of students we teach in collaboration with Architectural Engineering and Landscape Architecture. The course combines all four of the primary engineering disciplines with architects and landscape architects. Faculty from across the disciplines lead the class and are assisted by practicing architects and engineers. We are currently studying means to increase student participation in the course.

Scheduling conflicts across the six disciplines and an adequate quantity of collaborative work environments are the greatest obstacles.

New Actions:

1. In spring 2011, Ulrich Knaack, Professor Design of Construction and Building Technology at the Delft University of Technology, was appointed the inaugural Eleanor R. Stuckeman Visiting Professor. Professor Knaack primary responsibilities included advising students in Arch 332 (third-year design) and Arch 492 (fifth-year design) on building enclosure design. He conducted a series of lectures and workshops on building envelopes culminating in full-scale mock-up constructions of building façade portions by fifth-year students. Additional lectures and workshops were provided by his colleagues Marcel Bilow and Tillman Klein, also from TU Delft. Professor Knaack's participation enhanced student project development on the aspects of comprehensive design that include building envelopes, environmental design and sustainability.
2. Commencing in the academic year 2011-12, the primary evidence for 2009 Student Performance Criteria for B6 Comprehensive Design (consisting of criteria A2, A4, A5, A8, A9, B2, B3, B4, B5, B8, B9) will be located in Arch 331/332 (Third-year design studio) as well as Arch 491/492 (Fifth-year Thesis Studio) with supporting evidence from Arch 480 (Building Systems Integration). The switch of the comprehensive design to an earlier year level was recommended in the 2008 Visiting Team Report as a means of better regulating the type of comprehensive design project students executed and allowing the fifth-year projects greater latitude for research and design investigation. For the next two years through 2012-13, both third-year and fifth-year studio classes will be designated as comprehensive design to assure all current students have met this requirement. Assuming a successful accreditation review of comprehensive design criteria in 2013-14, it is projected to remain at the third-year level.
3. Commencing in spring 2012, five fifth-year B.Arch students will participate in the interdisciplinary BIM/Integrated Project Delivery course to meet the requirements of comprehensive design. Previous to this year, only M.Arch architecture students have been able to take the course. Current space, scheduling and hardware limitations limit participation to a total of 30 students including five architecture students.
4. All architecture students had travel costs covered to attend the 2011 Solar Decathlon in Washington, DC. Comprehensive design lessons from the projects were incorporated into third-year design studio courses. In addition, participants from New Zealand's entry presented their project at University Park to all third-year students immediately prior to the competition.

5. All current third-year and fifth-year students will be attending a day-long demonstration of fire safety testing at FM Global's national headquarters in Rhode Island in March 2012. In conjunction with a lecture the previous week, students will be presented with the demonstrations on the affects of architectural design on life safety and property insurance.

Notable Program Changes

Administrative and Staff Changes

Over the past three years since the 2008 NAAB visit, the Department of Architecture has undergone significant changes to the administrative structure and funding opportunities as a result of \$20 million endowment to the Stuckeman School of Architecture and Landscape Architecture begun in 2008.

The Department has been administratively reorganized into the Stuckeman School with our sister program in Landscape Architecture in 2009 and the permanent school director, Nathaniel Belcher, has been in office since July 2010.

A new governance document has been adopted creating much greater centralized decision-making through the Director and faculty representatives on the School Council. The Council acts to advise the Director on matters concerning the school and its endowment and any shared departmental facilities and curriculum issues. The Council first convened in fall 2010. Promotion and tenure activities remain autonomous at the department level, but also include review at the Director's level. An outside Stuckeman School Advisory Board has been formed and first convened in November 2011. The advisory committee includes practitioners and educators in architecture, landscape architecture and graphic design with the charge to advise the Director on matters critical to the education and practice of the disciplines housed within the School.

The Department of Architecture has successfully searched for and hired a new permanent department head. The new head, Mehrdad Hadighi, formerly of SUNY Buffalo, will begin his appointment on January 1, 2012. With the appointment of the head, there remains two open faculty lines. A search is underway to fill the position in digital fabrication for the start of the appointment in fall 2012. A second open line has not been approved by the College for an external search. Funds from the line are currently used to hire fixed-term faculty. A multi-year fixed-term position responsible for professional practice curriculum was extended in spring 2011 and another multi-year fixed term position covering general education and introductory theory will be extended in spring 2012.

Several administrative changes have been made over the past year. The six former architecture staff positions are now classified as Stuckeman School staff positions with duties that have expanded beyond the department and include other students and programs in the School. All staff now report to the Director and coordinated by the Assistant to the Director staff position. The changed staff members include two

woodshop personnel, three office staff and one academic advisor. One staff position was eliminated in 2010 due to budget cuts. One department position was shifted to an all-school budget coordinator. Another department position was shifted to include all reception and travel coordination for the school. The department retains one "program assistant" with primary duties to administer the undergraduate programs. The department academic advisor responsibilities have grown to include oversight of all Stuckeman School students. The two woodshop personnel are now responsible for overseeing students in both architecture and landscape architecture (until this year the department woodshop was accessible to only architecture students). One half-time woodshop position has been funded from temporary funds to accommodate the greatly expanded student numbers. In addition, one three quarter-time Stuckeman School communications coordinator started at the beginning of the year. This staff position oversees communication through the school and departmental websites, press releases and e-newsletters.

In last year's report we noted that staffing was in a transitional phase. This year, most of the structural changes have been made, but there continues to be instability in what was formerly a very stable staffing condition in the department. Retirements and staff changes have resulted in significantly less experience in the office staff. Most of the positions that have shifted from Architecture to School staff are still funded through the Architecture Department's budget lines and will need to be clarified in the near future. The new hire of the communications coordinator has greatly enhanced the department's ability to publicize accomplishments and organize and record events.

Budget

The Department of Architecture's permanent budget lines allocated directly from the College of Arts and Architecture has received a 1% permanent funding cut for 2010-11 (\$20K) and a 2% permanent cut for 2011-12 (\$40K). The permanent cuts have been made through staffing reductions. We anticipate a 5%-10% budget cut over the next three years. Funding supporting digital technology, faculty travel and lectures are the most vulnerable portions of the budget. Approximately 20% of the department general allotment has been transferred to the Stuckeman School to cover expenses common to both architecture and landscape architecture costs. This includes printing and copying costs, phones, and other shared infrastructure costs.

Resources from the Stuckeman Endowment are currently being used to offset some of the department allotment cuts. During 2010-11, School funds were used to support student travel and visiting critics and lecturers. Currently, the endowment generates approximately 80% of its eventual total projected \$800,000 annual funding when full vested. The endowment covers the salaries of the School Director and Assistant to the Director. The greater portion of the endowment covers salaries including five new named professorships and two new visiting practitioner positions (note: it is projected the School faculty will increase by a FTE of three or four faculty members). As mentioned above, The Eleanor R. Stuckeman Chair was filled starting in spring 2011 and rotated by semester between architecture and

landscape architecture. The Chair of Design Innovation is currently filled by Ray Gastil as noted earlier. The Chair of Design Integration is split between the two new department heads of architecture and landscape architecture. One of the visiting practitioner positions as enabled us to augment our comprehensive design faculty (see above).

In addition to new faculty positions, the endowment generates income earmarked for faculty-led design computing and collaborative design research. Faculty research grants are available to draw from this funding. The funds are also being utilized for strategic initiatives driven by each department's strategic plan.

Curriculum

In November 2011, the Department of Architecture faculty approved formation of an extension of the current post-professional Master of Architecture program. The proposal is currently under review within Penn State's Graduate School. The new M.Arch program is a 98-credit, seven-semester (3+) course of study intended for review as an accredited degree program as a first professional degree. The proposed timetable projects the first enrolled students in the fall of 2013 with candidacy review two years later. The program projects an initial cohort of 10-15 students per year-level with an ultimate size of 20-30 students per year. The program is designed to accommodate "4+2" students seeking an accredited M.Arch degree and have met appropriate preparatory professional courses. There are no anticipated changes to the current five-year B.Arch program as a result of new proposed M.Arch.

The Department of Architecture has been approved by Penn State's Graduate School to offer a PhD in Architecture to complement our existing M.Arch post-professional degree and B.Arch accredited degree. The program is currently on hold as an all-university curriculum review has placed a moratorium on most new PhD programs and existing programs with low enrollments. Alternative approaches for implementation are currently being studied.

Over the past two years, our Rome study abroad program "Sede di Roma" formerly taught by Penn State faculty the past 15 years has evolved into a third-party provider entitled the Pantheon Institute. While the faculty remain the same, the Pantheon Institute is able to offer additional housing and curricular options to our students by leveraging the inclusion of multiple schools. After two years of operation as a third-party entity, we have seen improved studio and housing facilities and greater course options. We are continuing to monitor the program changes to ensure the historical excellence of the program is maintained. Student surveys continue to report strong support for the program through the change of operation.

The Department of Architecture will host the 2012 National Conference on the Beginning Design Student in March 2012. The conference will feature perspectives

from across multiple design fields including graphic design, engineering, landscape architecture as well as architecture.

Admissions

The accredited B.Arch program attracts approximately 800-900 applicants per year (including freshman admittances reported in Part I and change of major and transfer students) and are ranked academically at the very top end of all Penn State applicants. Currently, portfolios are required for all transfer students applying from other schools outside Penn State and change-of-major students from Penn State students enrolled in programs outside architecture. For incoming fall 2012 students, portfolio submissions will be made through the online digital portfolio vendor "Slideroom." Digital portfolio submissions will be required for **all** freshman admittance applicants for incoming fall 2013 students. It is anticipated that admission yield rates will decrease for all Penn State programs for incoming fall 2012 students due to ongoing legal situations regarding child abuse charges against a former football team assistant coach. Long-term affects on admissions and funding at Penn State are difficult to predict at present.