

Institution: The Pennsylvania State University
Academic Unit: Department of Architecture
Administrator: Scott Wing, Interim Department Head
Last Accreditation Visit: Spring 2008
Date: November 30, 2010

Part Two: Narrative Report

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.

Actions:

1. As reported in 2009, 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 (20-24 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. This fall we created 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 a 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 (Professors Costanzo, Aeschbacher, and Henn). 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. In the next year we may evaluate the content of this class in light of its delivery of critical thinking skills. It is not currently indicated as providing evidence for criteria A2.
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 492 (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.

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.

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. We continue to find the student research results are uneven. The majority of resulting work may be better described as data and information documentation 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. As mentioned above, three recently hired faculty members, Professor Rebecca Henn, Professor James Cooper and Professor Denise Costanzo have each received their PhD's in architectural theory or architectural history. The addition of the new faculty greatly expand 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.

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 this past 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. Approximately one-half of the students are in collaborative architecture/landscape architecture teams under the direction of a jointly appointed faculty member. Additional funding for this studio in the spring will allow for greater joint participation.

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. As noted last year, a series of technical drawing exercises was added to Arch 204, the introductory materials and construction course during the

spring 2008 semester. 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.

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.

Actions:

1. 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. We are currently in discussion on reformulating one of the environmental systems engineering courses so it is taught within the studio setting. Architectural faculty with stronger interests in building systems integration are now guiding the third-year studio work.

3. As noted in the 2009 report, fifth-year faculty are evaluating processes to enable Arch 480 (Building Systems Integration) to more explicitly illustrate the 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. This spring 2011, we have named Ulrich Knaack, Professor Design of Construction and Building Technology at the Delft University of Technology, as the inaugural Eleanor R. Stuckeman Visiting Professor. Professor Knaack will be advising students in Arch 332 (third-year design) and Arch 492 (fifth-year design) on building enclosure design. He will also be conducting a series of lectures and workshops on building envelopes culminating in full-scale mock-up constructions of building façade portions by fifth-year students. We believe Professor Knaack's participation will greatly enhance attention on the aspects of comprehensive design that include building envelopes, environmental design and sustainability.
6. As noted in 2009, Penn State hosted a conference in fall 2009 focused on the teaching of sustainability in architecture programs. Leading faculty

from across the country attended the symposium to discuss and share curricular strategies for teaching a range of sustainable design practices in architecture programs. The faculty committee CECA (Committee for Environmentally-Conscious Architecture) is developing curricular approaches to meeting some of the student performance criteria (specifically 2009 SPC B3 Sustainability and B8 Environmental Systems) involving Comprehensive Design.

This 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.

7. In addition to the speakers at the two conferences noted above, the Department of Architecture lecture series has expanded over the past two 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. Lecturers in the past year include topics of sustainability: Ken Yeang, Vivian Loftness, Ed Begley, Jr., Warren Byrd, Mary Gutkowski, Bill Dowell; Building systems integration/materiality: Glenn Bell, Emily Pilloton, Dennis Sheldon, Mathius Schuler, John Jackson, Mark West, Kyna Keski, Chris Brandt, Peter Lynch; Legal issues, zoning and development: John Folan, Michael Peters, Joe Barnes, Jean-Pierre Le Dantec, Brenda Webster, and Adam Yarinsky.
8. The Department has formed a new student organization titled SEED (Students for Energy-efficient and Environmental Design). They hosted an exhibit of student work displaying environmentally-responsive design in spring 2010. The student group is currently working on the design on an off-the-grid library module for shipment to Ghana.
9. The Department of Architecture recently received the highest award for the 2010 AIA Building Information Modeling Award "Integrating BIM in Academia." The award recognized our BIM course we teach in collaboration with Architectural Engineering and Landscape Architecture. The unique collaborative 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.

10. All architecture students attended the 2009 Solar Decathlon in Washington, DC, including Penn State's entry to the competition. Penn State's participation in both the 2007 and 2009 Solar Decathlons have allowed for a wide inclusion of student participation in comprehensive design and build techniques necessitated by the competition. Although the program was not required, a large percentage of students participated at some point of the two-year design process.
11. The Department of Architecture indicates 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) to be 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.

Notable Program Changes

Over the past two 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. A new governance document has been adopted creating much greater centralized decision-making through the Director and faculty representatives on the School Council. It is anticipated the new school structure and financial support will enrich the curricular options for our students at both the accredited undergraduate and post-professional graduate levels. Promotion and tenure activities remain autonomous at the department level. A permanent school director, Nathaniel Belcher, was named in July 2010.

The Department of Architecture has now begun an outside search for a new permanent department head to be filled by July 2011. In other staff changes we have recently added a new staff position, Assistant to the Director with management responsibilities overseeing all office staff. All office staff of architecture and landscape architecture has been reorganized under the School Director's purview with some shifting of responsibilities. Both departments retain "program assistants," although budget, human resource, promotion and tenure, and reception duties are now shared by three staff members. One fixed-term staff position has been eliminated due to College and University budget pressures. An additional one-half staff position is planned for the woodshop to provide access for landscape students to utilize the shop (currently only the architecture department financially supports the shop and only architecture students have access). During the summer 2010, two long-time staff members retired including the architecture department's office supervisor. We now have a transitional situation with many staff members in new or adjusted positions.

The gift will bring a number of enhancements to the existing departments of architecture and landscape architecture with expected annual funds to exceed \$800,000 when the endowment is fully vested. Currently, the endowment generates approximately 60% of its eventual total. The endowment covers the salaries of the School Director and Assistant to the Director. The greater portion of the endowment will cover salaries including five new named professorships and two new visiting practitioner positions (note: some of these positions are visiting one semester equivalents or are intended for standing faculty. 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 will be filled starting in spring 2011 and rotate by semester between architecture and landscape architecture. The other chair and professorships will become fully invested over the next two years.

The existing endowment generates approximately \$175,000 earmarked for 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. Significant enhancements to digital fabrication equipment and digital computing and representation have been made over the past year.

The Department of Architecture's permanent budget lines allocated directly from the College of Arts and Architecture has received annual 1% cuts over the past several years. 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. Our three-year plan projects the use of the Stuckeman Endowment to offset some of these department allotment cuts.

The Department currently has two open faculty lines. One faculty line is projected to be filled by the incoming Department Head. The second line has been frozen by the College in anticipation of the University budget cuts, although we may use the resulting temporary funding for visiting faculty or other needs.

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 envisioned to be modest in size and combine resources with Landscape Architecture proposed PhD program. Initially, most students will be supported through external research funds, bolstering the technical resources of our current Masters students and assisting in faculty research. Externally funded faculty research has expanded significantly since the last NAAB visit, with the largest grants from NIH, NSF, and DOE

Over the past year, 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 involvement of multiple schools. Penn State University insisted on this change of operation (as directed by the Dean of the College and the Office of Global Programs) due to potential conflicts of interest in the provision of housing. After one year 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.

Our student organizations have blossomed over the past year in participation and leadership. Our AIAS President was named Chapter President of the Year by the National Organization of AIAS and he now serves as one of the four Quad Directors. Students in AIAS now sponsor lectures, workshops, charitable activities and social events. The Department has supported travel to the Forum and Grassroots national conferences. NOMAS (National Organization of Minority Architecture Students), a newly formed student organization, is active within the school through a series of social events and attendance at national conferences with the support of the Department. The growth of the organization parallels our success in broadening the under-represented population of our program over the past three years. SEED is a new student organization formed last year. The group sponsors environmentally-responsive design through lectures, design-build projects and consultation on curriculum involving sustainability.

In spring 2010 we celebrated our 100th year of architecture courses offered at Penn State and had the pleasure of George Miller, President of the AIA, and proud Penn State Architecture alum from the class of 1973 as keynote speaker. We are on to the next 100 years in January 2011.

Institution: The Pennsylvania State University
Academic Unit: Department of Architecture
Administrator: Scott Wing, Interim Department Head
Last Accreditation Visit: Spring 2008
Date: November 30, 2010

Part 1: Clarifications

Section A, Question 9b: ACT scores:

ACT scores entered are the composite scores.

Section B, Question 5b, Credit Hours for Completion of each Program:

There are six credit hours that are required for the “professional” credits that double count in the “general education” credits. The total number of credit hours required for the B. Architecture is 162. The total professional credits are 111 credits counting these six credit hours.

Section C, Question 2b: Financial Aid

Penn State is unable to provide summary financial aid information at the program or department level.

Section F, Question 4: Are your students required to have a laptop computer?

Yes, after first year. Starting in the second year, students are required to have a laptop.