

GREENING ARCHITECTURAL EDUCATION: RANKING SCHOOLS TO ENCOURAGE CHANGE

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ABSTRACT

There currently are scattered rankings of green architecture programs (such as one suggested by *Design Intelligence*). Such rankings are, however, anecdotal in nature and based primarily upon the opinions and perceptions of third parties. To be taken seriously (by other than those lucky enough to be lauded), a ranking or rating of architecture program “greenness” must address all accredited architecture programs and must be based upon replicable and consistently applied criteria. This is not now the case.

A non-profit corporation is taking a different approach to greening the halls of architectural education. This approach involves the development and implementation of a rating system that will evaluate all schools of architecture on their greenness. This paper provides the background and context for this new rating system and explicitly enumerates the criteria proposed for use with the system. The intent of the paper is to present the system in a public forum to provide an opportunity for widespread feedback and critique.

1. INTRODUCTION

A number of efforts have been made in the past few years to encourage architecture programs to do more to prepare graduates who can actively engage in environmentally-responsible design. The 2010 Imperative (1) asked architecture programs to make a three-point commitment to environmental awareness in projects and facilities. It appears that less than 20% of the accredited architecture programs in North America have formally adopted the Imperative—and sadly it is now 2010. There are surely numerous reasons (some valid) why the majority of architecture programs have not adopted the 2010 Imperative. On the other hand, it really is primarily a

statement of support for environmental awareness in architectural education and associated facilities. And “carbon pollution” continues apace.

Several organizations, including the Society of Building Science Educators (SBSE) and the Association of Collegiate Schools of Architecture (ACSA), attempted to influence the recently revised National Architectural Accrediting Board (NAAB) criteria for evaluation of architecture programs. For a sense of the extensive discourse that accompanied this effort refer to the archives of the SBSE listserv (2). Depending upon who one talks to, these efforts were either mildly successful or a dismal failure. No one seems to think they were an unmitigated success. One of the proposals with substantial potential for institutional impact suggested that all architecture programs maintain a viable “sustainability plan.” This idea did not see the light of day. In the newly adopted NAAB criteria, demonstrating awareness and understanding of environmentally-responsible design still falls squarely on the shoulders of students (through displays of their best work during accreditation visits).

Environmental education resources have been made available by groups such as the American Institute of Architects and SBSE. See, for example, the Carbon Neutral Design Project (3). As valuable as such resources are, it is generally conceded that none of these interventions has truly succeeded in engendering meaningful and widespread change across the diverse range of North American architectural education programs. Collectively, these programs appear to be almost (and at best tentatively) positioned to enter the 21st Century—a decade too late. Another means of affecting change seems to be called for.

Several architectural educators believe that a transparent and broad-based rating system that relies upon quantifiable

metrics can reward programs that are advancing environmentally-responsible architectural design—and, equally important, hold programs that are not seriously addressing such issues publicly accountable. Such a rating system would also be very useful to would-be architecture students with an interest in green design.

2. THE NEED FOR INFORMATION

A presenter at the 2009 *Greening of the Campus* conference noted that prospective students are increasingly including the “greenness” of an institution in their decision-making process when selecting a college or university. A rather quick search of Internet sources revealed no definitive data to indicate how important this factor may be or if it is a growing pattern. Available majors, cost, and geographical convenience appear to top the current list of student selection criteria. Nevertheless, it was refreshing to hear of this trend. One would expect (or perhaps hope) that prospective architecture students would be even more keenly interested in the greenness of the programs in which they are about to spend six years of their lives—the presumption being that architects as shapers of the environment would also seek to be stewards of the environment, a quest that would be simplified by a supportive educational environment.

A reasonable question to ask then is: where can prospective architecture students find credible information regarding the greenness of an architecture program? The answer today appears to be: good luck with that. Architecture programs have historically been loath to participate in rankings of general quality—such rankings being so subjective. Yet those rankings of architecture programs that are published usually provide recruitment fodder for the favored programs. Because the stakes for society are so high—buildings have a huge impact on the environment and contribute substantially to carbon emissions—it would seem that students should have solid information upon which to choose a school if environmental responsiveness is a major concern. That is not the case today.

Most information regarding “green” or “sustainable” architecture programs that is freely available on the Internet consists of anecdotal comments on various discussion forums about programs from former and would-be students. One example of this discourse: “I’ve heard University of Texas Austin and University of Oregon Eugene are good but just touch on the green aspects. Does anyone know of some good schools?” Indeed, does anyone know of some good green schools?

Architecture programs themselves do little to assist prospective students in choosing a green option. A recently completed study shows that the web sites of most accredited

architecture programs are silent on green and sustainable efforts and initiatives—with a few notable exceptions (4). It might be argued that in today’s wired environment, a school’s web site is its front door to the public (including would-be students). The schools themselves are not helping make a case for their “greenness” through their entry portals. Does anyone know of some good green schools?

3. PROPOSED GREEN RATING CRITERIA

The following criteria are proposed to frame the issues upon which accredited North American architecture program will be ranked for “greenness.” These criteria attempt to sample a program across several dimensions, including faculty, facility, students, curriculum, and institutional setting. As suggested below, “greenness” is a general term that is used to collectively assess the extent of a program’s involvement in environmentally-responsible design—the term includes green design and efforts toward sustainable design (including net-zero energy and carbon-neutral design).

Responses to a number of issues will be normalized by full-time equivalent student enrollment to equalize the efforts of large versus small schools. Responses to these criteria will be sought from all accredited programs through a voluntary reporting process. All architecture programs will be listed in the ratings—even those who choose not to respond. Information will be provided by the schools themselves, but spot audits will be conducted to verify accuracy of the information provided.

The rating process is intended to operate on an annual cycle. The following criteria are proposed at this time:

FACULTY

- Number of faculty who are SBSE members
- Number of faculty who are LEED-AP
- Number of faculty who are members of AIA COTE
- Number of faculty papers on “sustainability” presented
- Number of faculty who attended Greenbuild
- Number of faculty who attended the ASES solar conference
- Number of faculty who attended the SBSE retreat
- Number of faculty who attended other green events
- Number of faculty who are actively involved with professional society committees addressing sustainability-related issues
- Number of faculty who are involved with funded research addressing sustainability issues

STUDENTS

- Number of students who attended Greenbuild
- Number of students who attended ASES solar conference
- Emerging Green Builders chapter and number of members
- Student chapter of ASHRAE and number of members
- Other green student organizations

Number of students receiving institutional support for research efforts substantially related to sustainability

INSTITUTION

Is a signatory to the American College & University Presidents' Climate Commitment
Is a member of USGBC
Has a formal commitment to greening new and existing campus buildings
Has formally adopted the 2010 Imperative
Has formally endorsed Architecture 2030
Has a formal and current architecture-level "sustainability" plan
Has a dedicated page on green/sustainable design activities/opportunities within the department web pages
Has sponsored campus-wide or program-focused lectures/workshops that address green/sustainable design

CURRICULUM

Includes a required studio course on green/sustainable design
Includes an elective studio course on green/sustainable design
Includes a required lecture course on green/sustainable design
Includes an elective lecture course on green/sustainable design
Includes a required studio course on design of net-zero energy or carbon-neutral buildings
Includes an elective studio course on design of net-zero energy or carbon-neutral buildings
Includes a required lecture course on net-zero energy or carbon-neutral buildings
Includes an elective lecture course on net-zero energy or carbon-neutral buildings
Includes a required course (studio or lecture) that substantially addresses LEED
Includes a regularly offered elective course (studio or lecture) that substantially addresses LEED

FACILITY

Architecture facility is LEED-NC or LEED-EB certified
Architecture facility is benchmarked with respect to:
 Energy intensity index (Btu/sq ft/yr or per student)
 Water intensity index (Gal/sq ft/yr or per student)
 Waste intensity index (lb/sq ft/yr or per student)
Architecture facility has an active recycling program

4. SUMMARY

A number of architectural educators are concerned about the green-washing of architectural education. The currently available rankings of green architecture programs do not dispel such concerns. Because of the substantial impact of the built environment on resource consumption and carbon

emissions, students about to embark on a career in architecture should be able to access consistently-applied and meaningful evaluations of an architecture program's engagement with green/sustainable design. We believe that the green program rating system proposed herein is a step in the right direction. The program is expected to be launched in fall 2010 with the first annual cycle of ratings being available in spring 2011. Comments on the proposal and suggested criteria are actively sought.

5. REFERENCES

1. Architecture 2030. 2010. The 2010 Imperative. Santa Fe, NM. [architecture2030.org/2010_imperative/index.html]
2. SBSE. 2010. The SBSE Archives. Society of Building Science Educators. [www.lists.uidaho.edu/pipermail/sbse/]
3. SBSE. 2009. *Carbon Neutral Design: Curriculum Materials Project*. Society of Building Science Educators. [www.architecture.uwaterloo.ca/faculty_projects/terri/carbon-aia/]
4. Hubbert, T. 2010. *Perceptions of Environmental Responsibility in Architectural Education*. Research paper, Department of Architecture, Ball State University, Muncie, IN.