Penn State wins Autodesk BIM Experience Award

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Penn State's Department of Architectural Engineering and Stuckeman School of Architecture and Landscape Architecture have won the Autodesk Building Information Modeling (BIM) Experience Award

The programs were honored by the manufacturer of three-dimensional design, engineering and entertainment software for incorporating BIM in the architecture, landscape architecture and architectural engineering curricula.

BIM is an integrated process for digitally exploring a project's key physical and functional characteristics before it is built, according to an Autodesk press release.

"It's clear that the construction and design businesses are becoming more and more complex. Projects are more difficult to design and build every year," said Robert Holland, associate professor of architecture and architectural engineering. "[The University is] committed to providing our students opportunities that will help prepare them for careers in design, engineering and construction. Part of that is exploration of innovative building industry concepts such as building information modeling as well as integrated project delivery."

Holland said that BIM permeates much of the curricula. "Our fourth-year students from mechanical, structural and lighting, electrical and construction engineering participate in an architectural engineering design studio where they use BIM frameworks to develop architectural form and space as well as learning how to integrate structures and building in a piece of architecture."

He continued, "A number of our fifth-year students put together teams as they participate in a year-long architectural engineering BIM capstone project. It's kind of like a thesis project. And as a team, they utilize BIM to analyze a complex building and propose changes to the building's design, particularly related to the improvement of sustainability, life cycle cost and constructability."

Holland cited a third example of BIM's integration in the curriculum. "We have what we think is a pretty innovative studio where graduate and undergraduate students from the six major design and construction disciplines — architecture, landscape architecture and the four AE disciplines — participate in a collaborative BIM design studio. In this studio, they form three teams of six students each, which reflect all these major disciplines and they use BIM and integrated project delivery to design as well as integrate the systems of a project."

The award recognized the interdisciplinary work between the programs and the use of energy analysis software tools in BIM courses and studios to encourage sustainable design practices.

"One of the things we're trying to do is force the students out of their discipline silos," Holland explained. "We want them to spend more time in an environment where they need to collaborate

and rely on each other and ultimately we hope as they graduate this will promote better collaboration of these disciplines and eventually a better built environment."

Listen to PodCast Interview on the BIM Award here.