WMU student creates design challenge

By Evan Magura

WMU student creates challenge for design of a new sustainable building.

A new sustainable building will be designed to teach Western Michigan University students and residents of Southwest Michigan about sustainability thanks to a competition created by a Western Michigan University student.

A Western Michigan University mechanical engineer senior, Kelsey M. Pitschel, wrote the proposal for the challenge and helped to run and organize the competition in spring 2014. Pitschel also works at the Office for Sustainability as the Design Challenge coordinator.

"I feel moved to work on the Education Space because it is the most exciting and hands-on way to learn about important sustainability concepts such as rainwater collection, solar energy and composting toilets," Pitschel said.

Derek Kanwischer, coordinator for sustainability projects, said that the Design Challenge was proposed to create a new sustainable building for students and professionals to work together to develop a new educational center where the Office for Sustainability could host events, workshops, meetings and other "educational opportunities." Kanwischer said that the main focus of the Design Challenge is for students to collaborate with like-minded people who are passionate about sustainability.

"We saw the Design Challenge as an opportunity for students to gain real-world experience working in teams with community experts and professionals who design and build sustainable structures for a living," Kanwishcher said.

The teams consisted of mostly undergraduate Western Michigan University students and was open to other colleges in Southwest Michigan.

Pitschel said that the jury panel that chose the winner of the competition featured people from various departments from Western Michigan University. These departments vary from the Facilities Management Planning Division, Projects/Construction Division and employees of the Office for Sustainability.

Pitschel said she is excited that the Education Space will teach students and residents about sustainability related topics.

Kanwischer agrees with Pitschel that the Education Space, located on the Gibbs House property, will be a benefit for Western Michigan University.

"The space will provide a valuable asset and resource for Western Michigan University," Kanwischer said.

One of the key features of the new building will be solar panels that convert solar energy into electricity. This will show Western Michigan University's commitment to be environmentally conscious by looking to alternative sources of energy.

"I believe a truly sustainable system should rely on renewable energy sources rather than natural gas or fossil fuels," Pitschel said, "The use of solar energy as an alternative will allow the new building and the Gibbs house property to be less reliant on electricity from Consumers Energy."

Pitschel said there is another reason why it is important for the new building to use solar panels.

"The solar panels will illustrate a real-world but small-scale demonstration of how renewable energy is used," Pitschel said.

Another key feature of the new education center, according to a presentation written by Pitschel, is an "interpretive display" designed to teach visitors about "on-site sustainable design features."

Kanwischer said that another feature of the facility will be the availability for the use of Wi-Fi. By having an Internet connection, the space can be used for educational demonstrations and workshops to educate people about sustainability topics.

Kanwischer added another reason why it will be important for the new space to have Internet access.

"As a workspace for research projects, we anticipate the use of the Internet will allow us to track energy use and photovoltaic energy that will be produced at the site in the future," Kanwischer said.

A final unique feature of the new building will be a composting toilet that turns decomposed solid waste into nutrient-rich fertilizer for plants and trees.

However, Pitschel said there is one setback before one of these toilets can be installed.

"The city of Kalamazoo does not currently have codes or regulations for their use," Pitschel said.

Pitschel said she is optimistic that having a composting toilet at the new facility will inspire more places to use this alternative to regular toilets.

"We may be able to set a precedent for future and widespread use of this sustainable restroom solution," Pitschel said.

The new learning center also will be open to Kalamazoo Public School students from kindergarten to 12th grade to learn a variety of topics related to sustainability. According to the Design Challenge status report by Pitschel, the topics that the learning center will teach are regenerative design, sustainability, renewable energy, responsible industry, innovation and social consciousness.

"Inviting interested community members to the competition creates a more innovative and user-friendly space," Pitschel said.

One challenge that the Office for Sustainability experienced at the competition stage was that the number of student participants was much less than expected. Pitschel said that despite community members and local businesses being "very engaged," there was little involvement by the students who participated.

"There are not many students on campus during the summer when the design competition was underway. It was difficult to ensure commitments from the students," Pitschel said.

Pitschel said that the winner has yet to be officially announced.