Gibbs House Education Space Design Challenge
2-pager Overview
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The Office for Sustainability at Western Michigan University (WMU) is hosting a collaborative student, community and industry Education Space Design Challenge for multidisciplinary teams across southwest Michigan for an outdoor presentation space at the Gibbs House. The goal of the Challenge is to create a design for a Living Building Challenge-inspired outdoor presentation space to complete the Gibbs House Permaculture Demonstration and Research Facility in Kalamazoo, Michigan. Current and far-reaching impacts of the Design Challenge include engaging community sustainability education and unique leadership opportunities throughout both the collaborative design process and future sustainability programs of the Gibbs House.

The future education space at the Gibbs House will become a regional model for skill sharing for students and community members of all ages seeking demonstrations of regenerative design, sustainable living, leadership development, ecological design, and sustainable agriculture research. Successful design plans submitted by collaborative design teams will satisfy four main imperatives based on structure and materials, renewable energy and water, sustainability education, and beauty and innovation. The first imperative is for a low-impact, cost-effective, multi-purpose presentation space that can be constructed from sustainable materials and allows for a variety of functions such as lectures, educational activities, community events, and entertainment. The second imperative targets the Living Building Challenge Energy and Water Petals by integrating a grid-interconnected photovoltaic array shading structure that optimizes energy production and meets the entire electrical load of the space on an annual basis, and utilizes rainwater harvesting techniques for ecological water flow and minimal use. The education space must also create an active learning environment through the use of a sustainability exhibit that will educate visitors about the sustainable design features of the space. In an effort to advance a culture of sustainability across campus and promote

the natural interdependencies of humans and ecology, the education space must be an innovative and beautiful space that cultivates learning, environmental stewardship, and sustainability for all while also complementing the historic nature of the Gibbs House.

The Design Challenge will launch on April 18, 2014 at the Office for Sustainability's annual SustainabiliBASH event. The Design Challenge will include a series of educational and engaging events to provide a collaborative platform for the Design Challenge initiative and promote active learning for sustainability. The Gibbs House site visit is an applied and practical effort to bridge the gap between innovative ideas and real-world solutions by providing a guided tour of the Gibbs House property and discussing whole systems approaches for integrating the education space into the Permaculture Demonstration Plan. A series of design charrettes will be held over the course of the Design Challenge to engage design teams and passionate parties in skill building workshops. Charrettes will be hosted by industry leaders in sustainability to teach, discuss and brainstorm design elements of the education space such as solar photovoltaic system design, rainwater collection techniques, timber framing, ecological responsibility, and green building programming. The hosting of design charrettes throughout the Design Challenge is an effort to explore the shared experience of design for all teams and passionate stakeholders while effectively advancing toward a feasible solution.

One goal of the Design Challenge is to define design as a collaborative process. The complex problems of the current building industry such as post-construction waste, hazardous materials, ecological site destruction, inefficient building systems, and fossil fuel based utilities can only be solved with multi-faceted solutions created by multidisciplinary teams. Providing students, community leaders, and industry professionals with a unique opportunity to collaboratively solve real-world design challenges in pursuit of a useable, accessible, and beautiful outdoor presentation space is an effort to transform the on-campus construction process into a more integrated, collaborative, and sustainable approach.