THE UNIVERSITY OF TENNESSEE KNOXVILLE
COLLEGE OF ARCHITECTURE + DESIGN

Design/Build

archdesign.utk.edu/make

2018-2019

At a Glance

- The University of Tennessee is a land-grant university with a mission to address public need. As such, the college's design/build program exists to identify projects for the public good.
- Through exploration, collaboration and mission-driven innovation, the program applies design excellence, environmental performance and social responsibility to many challenges in the built environment to positively impact society and prepare students for careers in design.
- The design/build program started in 1976 and has produced award-winning and precedent-setting structures.
- The Governor's Chair for Energy + Urbanism, an unprecedented $2.5 million project, brings together the College of Architecture and Design, Skidmore, Owings & Merrill and Oak Ridge National Laboratory to investigate responsible urban living. Many projects in the Governor's Chair program play a role in the success of the college's design/build program.
- In 2016, the design/build program was named in the Top 7 by Study Architecture, a program of the Association of Collegiate Schools of Architecture.

Decades of Successes

- Beginning in 1976, the first structures designed and built by students were solar houses, which employed solar, passive and thermal storage. This important inaugural project was led by Gorden Mertz.
- In 1981, Stroud Watson founded UT's Urban Design program and received funding from the Lyndhurst Foundation to establish an urban design studio in downtown Chattanooga. For 22 years, student work contributed to today's award-winning public places in Chattanooga and its riverfront.
- In 1998, David Fox's studio engaged high school students in Chattanooga and Knoxville in the revitalization of their neighborhoods through UPSIDE (Urban Program in Sustainable Design Education).
- Tricia Stuth, Bob French and Richard Kelso led students to design and build A New Norris House in 2008, one of the first in Tennessee to earn LEED Platinum certification from the U.S. Green Building Council. The AIA Committee on the Environment named it one of the nation's Top 10 examples of green design in 2013.
- Beginning in 2009, Katherine Ambroziak led faculty and students to work with Knoxville ReAnimation Coalition to reanimate and reclaim East Knoxville's Odd Fellows Cemetery, a deteriorating African-American burial ground that dates back to 1880.
- Since 2010, John McRae and Katherine Ambroziak have led interdisciplinary studios to design schools, a medical facility and housing in Haiti. Students travel to Haiti to help local residents build the structures using locally sourced materials. Research in the Haiti Studio led to the publication of LIFEHouse guidebook, which addresses the urgent need for adequate building standards in the country.
- Jennifer Akerman and Bob French worked with more than 50 students from across the college to design and largely build the Beardsley Farm Education Center, a 1,200-square-foot center for Knoxville's urban farm. The Education Center has received numerous awards, including the national Brick in Architecture Gold Award in 2017.
- Students, led by John McRae, designed and built a water kiosk for 9,000 residents in the Red Bird community of Clay County, Kentucky. These residents now have access to clean drinking water.
- Beginning in 2015, Ted Shelton's students began investigating green oak. They discovered this typically unused part of the harvested hardwood is an extremely low-energy, carbon-friendly and beautiful wood product for structural elements in sustainable buildings. Shelton received an EPA grant for the research.

Net Zero

- Beginning in 2006, professors Edgar Stach and James Rose led studios to investigate net-zero buildings.
- A 300-square-foot prototype called UTZero was the college's first net-zero success in 2006.
- In 2011, students in the college's Institute for Smart Structures, led by James Rose along with many industry partners designed and built Living Light Solar House to enter the U.S. Department of Energy's Solar Decathlon. The team placed eighth overall and first in energy and was invited to exhibit in the Smithsonian's Folklife Festival.
- 1 million people saw Living Light as it was exhibited in Washington, D.C., and 50,000 people across Tennessee visited Living Light as it toured the state.
- In 2015, AMIE was unveiled. AMIE (additive manufacturing integrated energy) is a 3D-printed structure and vehicle that generate and share energy for off-grid living. AMIE has received numerous national awards, including the R+D Award from *Architect* magazine.