

Addressing MU Strategic Plan Goals
MU Department of Architectural Studies
Fall, 2013 Update

Goal: Build on MU's existing strengths in entrepreneurial, cross-disciplinary research to create a risk-taking culture that inspires faculty, staff and students to innovate

- The Department of Architectural Studies offers an immersive visualization (iLab) for research and learning. The lab advances visualization techniques and has of state-of-the-art digital media tools. Technology capabilities include large-screen 3D display, advanced motion capture technology, artificial intelligence agents for behavioral simulation and augmented reality capabilities. It is a one-of-a-kind resource on campus, and it is involved in a number of cross disciplinary research projects with colleagues across campus and at other universities. The iLab and the related research group is involved in following cross-disciplinary research projects funded by multiple Mizzou Advantage and MUITC Inter-disciplinary Innovations Fund grants:
 - Behavioral simulations for mental health resilience during disaster with Dept. of Communication, CARES, Journalism and State Emergency Management Agency (SEMA)
 - Developing virtual prototypes of healthcare environments (Sinclair School of Nursing SimLab); retail clothing environments (Textile Apparel Management); Metabolic Kitchen (Nutrition, Exercise Physiology)
 - Impact of digitally mediated collaboration on creativity by the interdisciplinary Creative Convergence Network which includes faculty from including faculty from instruction technology, theatre, psychology, art education, art and archeology in addition to Architectural Studies. This is Phase-2 of research building on the successful Mizzou International Symposium on “Creativity and New Media” hosted by Architectural Studies in Spring 2013.
 - In addition, multiple projects are in early stages of ideation with College of Engineering, CAFNR and other disciplines on campus.
- The Department of Architectural Studies continues to collaborate with Engineering and Ag Engineering departments through leadership on High Performance Buildings in the Midwest Energy Efficiency Research Consortium. MEERC is focused on disseminating information on the value of energy efficiency (EE) to all sectors of the economy; partnering with regional companies and agencies to make academic courses and training programs available to students, businesses, professionals, and design, construction and operations agencies; and working with industry and government agencies to advance development and applications of energy efficiency technologies. Recently, MEERC was instrumental in creating a graduate level certificate program in energy efficiency. As part of this graduate certificate program, the Department of Architectural Studies provides the online and resident courses in building energy efficiency and green building design.
- The department collaborates with other cross-disciplinary housing and environmental design colleagues at Louisiana State, Florida, Mississippi, Kentucky, Georgia, and Tennessee for the Southern Region Resilient Housing Project. This program creates curriculum and outreach for home builders and real estate professionals on the topic of resilient housing: housing that is less susceptible to tornados, hurricanes, and other

natural disasters as well as current strategies to maximize energy efficiency and alternative energy systems. The program also works on providing research on home construction methods appropriate for the Southern US to reduce home hazards such as mold, radon, and other toxins.

Goal: Use the broad and deep resources of MU's programs in the arts, humanities, sciences, professions, and intercollegiate athletics to partner with schools, community organizations and citizens to enrich the intellectual and cultural lives of all Missourians

- During the 2012-2013 academic year, students worked with two community groups on design projects.
 - Students designed a memorial to honor past, present, and future MU Veterans who attended or worked at MU and who served in wars since the Memorial Union was built in 1926.
 - Students worked with community leaders to redesign the Arrow Rock Lyceum Theater lobby area.
- In the Department of Architectural Studies, service in Missouri communities is routine, with partial funding from MU Extension and external grants. Practical solutions are developed and delivered in the Housing and Environmental Design program for:
 - HOME: Home Ownership Made Easier
 - Home Works: Maintaining your Housing Investment
 - Healthy Indoor Air for America's Homes
 - Community Revitalization and Sustainability
 - Energy Efficiency in Homes

These programs are in collaboration with statewide Community Action Agencies, City Councils and County Commissions,

- The department was also in collaboration with Ag Engineering, through the Missouri Agricultural Energy Savings Team a Revolutionary Opportunity (MAESTRO) program, which provided farm and farmhouse energy audits and retrofit opportunities to Missouri farmers.
- The iLab has hosted workshop sessions for high-school students across the state as part of the High School Art day with the Art Department at MU.
- The iLab hosted an open house during Adventures in Education for school children in Columbia and their parents to showcase faculty and student work and increase awareness of design.
- External partnering exists with St. Louis Community College, Washington University, and the University of Kansas to provide greater educational access for Missourians. Students from St. Louis Community College can complete a four-year accredited interior design program upon transfer to MU. Students continue their education to achieve the M.Arch degree upon transferring to KU or Washington University after their undergraduate degree in Architectural Studies to receive the M.Arch degree.
- Architectural Studies faculty and students are currently involved in the re-visioning the career success center with the Vice Provost for Undergraduate education. Students will conduct programming, research and design charettes to develop a cutting-edge learning space that benefits all MU students and faculty.

- Architectural studies faculties are working with Sinclair School of Nursing to evaluate their SimLab and propose recommendations for space efficiency. Students in Human factors Programming courses were partnered with students in nursing school to conduct this cross disciplinary inquiry.
- Architectural Studies faculty is conducting research on the learning spaces at Mizzou campus to examine the ways in which informal learning environments here support the 21st century learning skills of students. Informal learning environments are those spaces where students go to learn when not attending a regularly scheduled class and to advance the University's academic mission; MU has developed several such spaces over the course of the past few decades. The first phase of the project will involve the distribution of a survey to this representative sample, to uncover the various learning skills they employ, the informal spaces they use to engage in learning activities, and the physical qualities of those spaces in the context of their interactions with them. The second phase of the project will involve in-depth Post-Occupancy Evaluations of key learning spaces identified by the student sample, through behavior mapping and photo-voice interviews

Goal: Increase stature of MU as an international leader in interdisciplinary areas, research and creative activities

- Architectural Studies faculty conducted a creativity workshop involving the Creative Collections Group at Hallmark Inc., Kansas City and 7 Mizzou students of various disciplines (grads and undergrads; from art, design, psychology, theater, architectural studies, graphic design, digital storytelling and sculpture). The purpose was to examine how each discipline might have a unique perspective on an interdisciplinary creative process. The students' mission was to design a 21st century birthday celebration that goes beyond the old Hallmark model of "send a card" and responds to the new digital age user. This week-long process occurred in a co-located facility at the MU Architectural Studies iLab and was extensively documented with film, ongoing behavioral coding, nightly diary entries, and several measures (motivation and flow, use of multiple intelligences, user analysis and collaborative abilities). An interdisciplinary faculty network led by the architectural studies and including faculty from instruction technology, theatre, psychology, art education, art and archeology, is now examining the data. The students benefited by interacting with world-class creative team including studio directors, business managers, editorial directors, multimedia professionals and archival personnel.
- Architectural Studies faculty will work with colleagues in Agriculture School and Geography to explore the benefits of spatial visualization in precision agriculture decision-making using simulation prototypes. This project strives to document decision-making that arises from spatial visualization so that future decision support systems could be generated.
- The Department of Architectural Studies is co-leader and participates in a national web-based program on Home Energy through the eXtension.org program. This grant funded program provides collaborative, researched-based, energy information for consumers on topics such as existing homes, new construction, and alternative energy systems. For this program, the department directly collaborates with peer institutions such as North Carolina State, Nebraska, Montana State, and Louisiana State.
- A faculty member is the Editor of the *Journal of Housing for the Elderly*.